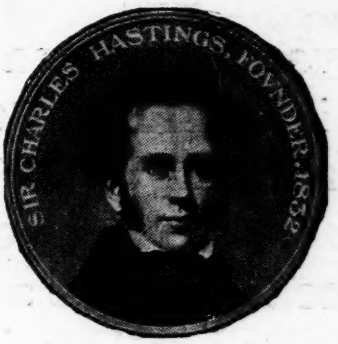
Medical Lib.
JUL 27 1921

The

British Medical Journal



The Journal of the British Medical Association.

INCLUDING AN EPITOME OF CURRENT MEDICAL LITERATURE.

WITH SUPPLEMENT.

No. 3159. SATURDAY, JULY 16, 1921. **Price 1/3**

OXFORD MEDICAL PUBLICATIONS

The Practitioners Encyclopædia of
MIDWIFERY AND THE DISEASES OF WOMEN.
Edited by JOHN S. FAIRBAIRN, M.A., F.R.C.P., F.R.C.S.
Crown 4to. Cloth.
About 1,000 pages, Illustrated.
Price to advance Subscribers, £2 12s. 6d. net.
The price will be raised after publication.
HENRY FROWDE AND HODDER & STOUGHTON,
1 & 2, Bedford Street, Strand, W.C. 2.

The SURGERY of the HEART.
By Sir CHARLES A. BALLANCE, K.C.M.G., C.B., M.V.O. M.S., F.R.C.S., Con. Surg. St. Thomas's Hosp., &c.
Illustrated by 48 figures. Demy 8 vo. 10/6 net.
MACMILLAN & Co.

By A. H. TUBBY,
C.B., C.M.G., M.S.
279 pages. 15 Illustrations. Demy 8vo. 15s. net.
A CONSULTING SURGEON IN THE NEAR EAST
London:
CHRISTOPHERS, 22, Berners Street, W.C. 1.

By FREDERICK W. PRICE, M.D., F.R.S.(Edin.), Senior Physician to the Great Northern Central Hospital, Physician to the National Hospital for Diseases of the Heart, London.
DISEASES OF THE HEART.
Their Diagnosis, Prognosis, and Treatment by Modern Methods.
With a Chapter on the Electro-Cardiograph.
Demy 8vo, 484 pp. Very fully Illustrated. 21s. net.

Lancet.—"By great care, and by the use of an amazing amount of material, he has accomplished what many readers have been waiting for, giving us a complete account of the diagnosis, prognosis, and treatment of heart diseases by modern methods in association with all the invaluable teaching bequeathed to us by the older masters of clinical observation."
Dublin Medical Journal.—"It is probably destined to take the place in the library of the present day physician that was occupied some twenty or more years ago by Sir W. Broadbent's well-known work."
Midland Medical Review.—"It is impossible to enumerate the many excellencies of this book."
London:
HENRY FROWDE AND HODDER & STOUGHTON.

By BEDFORD FENWICK, M.D.,
Consulting Gynæcologist to The Hospital for Women, Soho Square.
UTERINE FIBROIDS AND OTHER PELVIC TUMOURS.
THIRD EDITION. With Tables and Analyses of 1,000 gynæcological laparotomies.
"Dr. Fenwick's results are remarkably good."—THE LANCET.
Price 10s. 6d. net.
BAILE, SONS & DANIELSSON, LTD.,
85, Great Titchfield Street, W.

Angina Pectoris.
Walter Verdon, F.R.C.S.
In this work, proof is given that the Angina Pectoris springs, not from the heart but from the stomach, and herein is outlined a rational method of successful treatment.
The Rt. Hon. Sir CLIFFORD ALLBUTT, K.C.B.—"*I see much of great interest in your beautifully printed work. . . . In my own work I was hankering after some accommodation between your view and my own.*"
Sir JAMES MACKENZIE, F.R.S.—"*A storehouse of facts and observations of the greatest value. . . . A classic.*"
B.M.J.—"*A mass of material.*"
MED. TIMES.—"*Wealth of practical detail.*"
Demy 8vo. pp. 414. 18s. 6d. nett.
BAILLIÈRE, TINDALL & COX,
8, Henrietta Street, Covent Garden, London, W.C. 2.

NOW READY. 28s. net Postage 1s.
NEW EIGHTH EDITION.
THE MICROTOMIST'S VADE-MECUM.
By A. BOLLES LEE, Hon. F.R.M.S.
Edited by J. BRONTË GATENBY, D.Sc, F.R.M.S.
Sections by W. M. BAYLISS, C. DA FANO, A. DREW, W. CRAMER and THORNTON CARTER.
J. & A. CHURCHILL, 7, Great Marlborough Street, W.

JUST PUBLISHED.
Large 8vo. Illustrated. 21s. net.
THE SPLEEN AND SOME OF ITS DISEASES.
By Sir BERKELEY MOYNIHAN, K.C.M.G., C.B.
Bristol: JOHN WRIGHT & SONS LTD.
London: SIMPKIN & Co. LTD.

Valentine's Meat-Juice

In **Typhoid Fever, Diarrhoea and Cholera Infantum,** when it is **Essential** to **Sustain** the patient **without irritating** the **Digestive Organs,** the **Ease** of **Assimilation** and **Power** of **Valentine's Meat-Juice** to **Restore** and **Strengthen** has been demonstrated in Hospital and Private Practice.

THE quickness and power with which VALENTINE'S MEAT-JUICE acts, the manner in which it adapts itself to and quiets the irritable stomach, its agreeable taste, ease of administration and entire assimilation recommend it to physician and patient.

VALENTINE'S
PREPARATION
NUTRIO PERMET
MEAT JUICE.
The result of an original Process of Preparing Meat, and extracting its Juice, by which the elements of nutrition are obtained in a state, ready for immediate absorption.
DIRECTIONS-Dissolve one teaspoonful of the Preparation in two or three tablespoonfuls of cold or warm water. The use of boiling water changes the character of the preparation.

Physicians are invited to send for brochures containing clinical reports.

For sale by European and American Chemists and Druggists.

VALENTINE'S MEAT-JUICE COMPANY,
Richmond, Virginia, U. S. A.

A 190

Observations
ON
MALIGNANT GRANULOMA OF THE NOSE.

BY
SIR ROBERT WOODS, M.Ch.(HON.), F.R.C.S.I.,
HONORARY PROFESSOR OF LARYNGOLOGY, TRINITY COLLEGE, DUBLIN; LARYNGOLOGIST TO SIR PATRICK DUN'S HOSPITAL.

[*With Special Plate.*]

I VENTURE to think that the following two cases of a disease hitherto, as far as I know, undescribed are of sufficient interest to deserve a detailed description.

CASE I.

X., a man aged 68, consulted me in February, 1914, complaining of his nose. He was a big and robust countryman who had never had any serious illness in his life. His account of himself was very definite. He had never had occasion to consult a doctor for anything of importance, except when, on June 29th, 1869, he saw the late Sir William Wilde on account of "darkness" of the right eye. He left Sir William because he considered he proved his incompetence by suspecting him of having had venereal disease; and he never saw any doctor or had any treatment for any ailment until he was sent to me by Dr. Kerrigan in February, 1914. The eye was then no worse than it was in 1869, and for anything the patient knew it was no worse in 1869 than when he was born, but he discovered that it was "dark" at that time.

In 1905 he lost both taste and smell, but had no other trouble until December, 1913, when he found the nose blocked.

On examination, the bridge of the nose was sunken just below the nasal bones. The region of the right lacrymal sac was swollen, and a fistula below the internal canthus discharged a watery fluid on to the cheek. Both sides of the nose were filled with fetid crusts, the cartilaginous septum was gone, some of the soft tissues were deficient, and the walls of the nose in a condition of ulceration. The patient was well nourished, appetite good, no glands were enlarged, and the disease was strictly a local one. Syphilis was naturally at first thought of, but it soon became quite evident that it had nothing to do with the complaint. The foetor was quite peculiar, and quite unlike anything I ever before experienced; the crusts were glutinous, and adhered tightly to the forceps used for their removal. A specimen of blood was taken and found to be quite normal; the Wassermann test was negative; salvarsan was administered intravenously, mercury and potassium iodide were prescribed, but all without the slightest obvious effect on the disease. Specimens of the ulcerated surfaces were repeatedly removed, sometimes for diagnostic purposes, sometimes in the course of scraping operations preparatory to the applications of caustics. In every case examination showed granulation tissue to be the dominant feature, but in one place at least it had developed into something very like a sarcoma. Tiodine was injected subcutaneously for a considerable time; but it, too, was without obvious effect. The blood was several times tested for Wassermann's reaction after treatment with antisyphilitic drugs, but always with a negative result. The patient was kept in Sir Patrick Dun's Hospital for some weeks, during which time his temperature remained normal, and was then sent home. On his return about two months later the left lacrymal sac was swollen as the right originally was, and the fistula on the right side had healed.

The patient attended me at the hospital intermittently during 1915 without any substantial gain in his local condition or impairment of his general health. In the early months of 1916 the disease, which had hitherto been marked by the absence of obvious tumour, began to infiltrate the soft palate and back of the nose. In June of that year a necrotic area began to develop in the right side of the soft palate, and towards the end of July had perforated the palate, leaving a large hole about the size of a sixpenny bit. Deafness from Eustachian obstruction was very marked and as all attempts at catheterization failed, relief had to be given by myringotomy, which had to be repeated whenever the wound in the membrane healed. Some awkwardness in swallowing resulted from the perforation in the palate.

My colleague, Dr. Watson, who saw him with me in consultation, kindly undertook to try the therapeutic effects of *x* rays. This treatment was carried out at the end of July and during the month of August. No improvement resulted, and when I saw him on September 17th the soft palate was infiltrated in its whole extent, the perforation had increased in size, the increase being towards the middle line, so that the defect was about equally distributed on either side of the middle line. The edges of the perforation were very definite and sharp; quite rectangular on section. The floor of the ulcer was covered with a greyish slough; there was some redness at the edges.

By November, 1916, the ulceration had progressed in the palate, though it seemed stationary elsewhere, but this extension was irregular, the ulcer branched in the direction of the last right upper molar where the alveolar ridge was exposed and necrotic. He was again put on large doses of potassium iodide up to 20 grains three times a day. Myringotomy was performed every few weeks for the relief of deafness.

The patient's condition became steadily worse. The septum and turbinal tissues, including the turbinal bones, were completely destroyed, but the tissues of the face were never attacked. He ceased to attend hospital, and died at home in October, 1918, four years and a half after the onset of the disease. The progress of the disease could not be described as painful. The discomfort, though sometimes considerable, was never so great as to call for anodynes.

The case was as puzzling to the pathologists as to the clinicians. It seemed as if a wave of granulation tissue advanced irregularly into the healthy parts, breaking down behind as it advanced in front, so that there was never any great depth of pathological growth present. The term "malignant granuloma" was suggested by Dr. O'Sullivan, and I can think of no better label. Efforts were repeatedly made to discover some organism to which blame might be attached, but always without success.

CASE II.

The second case was that of a labourer in a wholesale store, aged 67, who was first seen by me in February, 1920. He had been complaining of discomfort in the nose for some weeks. He was a pale but organically healthy man who had not previously had any notable illness.

On examination, both sides of the nose were filled with the same glutinous crusts, with the same characteristic smell as in the other case. The quadrilateral cartilage was almost completely destroyed, and the crusts were firmly adherent to the edges of the perforation. The ulcer appeared to be spreading along the floor of the left nose. There was no sinking in of the nose below the bridge. Careful inquiry could elicit nothing in his previous history suspicious of syphilis, but as an aid to exclusion a specimen of his blood was examined by the Wassermann test, with a negative result. A specimen of the ulcerated tissue was removed for microscopic examination. It showed a very cellular granulation tissue invading the nasal cartilage; many polymorphs in the tissue. There were a few fibres, and the vessel walls were not thickened. Mercury and potassium iodide were prescribed, and a dose of novarsenobillon was administered intravenously on February 12th, 1920. A week after this injection a necrotic area appeared in the roof of the mouth on the left side of the hard palate. Through the floor of the slough necrosed bone could be felt by the probe. This necrotic patch measured about 10 mm. fore and aft and 6 mm. across. Blood was again sent for Wassermann test, with a negative report.

The condition of the patient grew steadily worse. The necrosis spread to the neighbouring parts of the maxilla, burrowing under the tissues of the cheek. Pain of a most severe neuralgic character set in, the nose and left side of the face were so exquisitely tender that he could not bear being dressed, and sleep became impossible without drugs. He even acquired a peculiar gait, moving cautiously from

one foot to the other, lest the jar of putting his heel heavily on the ground should hurt him.

By the beginning of June the nasal process and a large adjacent portion of the left maxilla was isolated and necrotic. The tissues of the face were attacked above the fold of the nostril and necrosed, leaving a large perforation with tender granular edges between the nose and the cheek, through which the dead bone could be seen and felt over a large area.

The treatment adopted during this time consisted in cauterization of the ulcerated surfaces by chemical caustics, such as acid nitrate of mercury; but though these appeared to arrest the disease now and then in places, it was quite evident that the general trend of the malady was from bad to worse.

We decided to try the effect of radium emanations, and accordingly, in June, four tubes obtained from the Laboratory of the Royal Dublin Society, of about 12 millicuries activity, in steel needles wrapped with tea lead, were placed through the perforation in the palate and left in for eighteen hours. In about two weeks it was quite evident that great improvement had resulted. The posterior part of the palatal perforation had epithelialized, and was no longer tender to the probe. A second dose of radium was given on July 17th, consisting of six tubes of about 20 millicuries activity in steel needles covered with eight wrappings of pure tinfoil. The needles were embedded in dental wax and left in for eighteen hours. In ten days the change was striking. The swelling had subsided, the tenderness reduced to a trifle, and the pain had eased off to such an extent that the patient had no difficulty in sleeping without drugs. Improvement was sustained, and in October the front of the left maxilla, which had become quite loose, was easily removed through the palatal perforation.

He put on flesh rapidly in the latter half of 1920, and remained quite well until Easter of this year, when a swelling appeared on the inner wall of the left nose near the body of the sphenoid. It was certainly a recurrence, but subsided within ten days after an exposure of 360 millicurie hours of emanation, screened through two layers of tea lead.

At my invitation the patient was seen in June by my laryngological colleagues Drs. Dempsey, Gogarty, Graham, Keogh, and Law, all of whom confessed that the case was unique in their experience.

One must hesitate before concluding that a case belongs to a new class, even though its clinical features differ from everyday experience. The vagaries of syphilis in particular are so notorious that the greatest caution must be exercised. I felt that in these cases syphilis was the one disease that needed the most rigorous exclusion. Not being a believer in the constancy of the Wassermann reaction in syphilis I placed no reliance on a negative report, though I am of opinion that, at least in the second case, the acuteness of the disease was such that the negative Wassermann amounted to a positive exclusion. But when, in addition to this and other evidence, all the best tried and most valued remedies are applied, as they were in both these cases, without the least effect on their progress, the case for its exclusion is overwhelming.

There remains to be considered the nature of the process in these two cases, for, although differing from one another in some important respects, their similarities make it likely that they resulted from the same cause.

Granulation tissue is usually the result of that attempt at repair that follows tissue destruction, and when the cause of destruction is bacterial there is little difficulty nowadays in recognizing the organism. In these cases no such organism could be found, and the presumption is raised that the granulation tissue, so far from being an evidence of attempted healing, is itself the primary cause of destruction.

Until we understand what is meant by a cell taking on malignant action we cannot doubt that what happens to one kind of cell may happen to another, and if we can have a malignant epithelioma, why not malignant granuloma?

The pathological side of the question, while of the highest interest and importance, must from the clinician's point of view give place to the interest attaching to the fact that the first case failed to be cured by *x* ray, and the second was certainly cured by radium.

INFECTIVE EXTERNAL HYDROCEPHALUS

("*SHIFTING EPILEPSY*").

BY

CECIL E. REYNOLDS, M.D., D.P.H., M.R.C.S.,

LOS ANGELES.

[*With Special Plate.*]

THE following case, at one time or another, presented all the symptoms of the various other cases of epilepsy due to localized hydrocephalus which I have reported elsewhere.

History.

L. H., female, born October 29th, 1911, of good stock, was healthy until she had whooping-cough in June, 1916, the cough of which dragged on until December, 1916, during which month she had sore throat and fever. Her tonsils were removed in January, 1917. From this time until March she would cry out in her sleep. During March she contracted a habit of constantly rubbing the palm of the right hand upon the head of her "Teddy Bear," and when questioned, said her hand itched. Later in March, 1917, she ran to her mother during the day with her right hand in a state of involuntary flexion. This contraction was repeated with increasing frequency and severity, and in a few weeks it became so strong as to resist her father's efforts to open the hand. Consciousness was unaffected in these attacks. In April, 1917, it was discovered that she was having, about four times a night, attacks in which the whole body stiffened and the right arm was convulsed. The attacks from June onward became solely nocturnal, and were more severe and frequent, especially after a febrile attack in July, in which the temperature was 103°. Her memory appeared to be failing. During this time she complained often of headache "all over," and of nausea, but seldom if ever vomited; she was obstinately constipated, and her nose bled almost every week. The appetite was poor, but the diet had been greatly restricted. A Wassermann test of the blood was negative. The condition became steadily worse, until about October 5th she was having almost continuous fits every night, and on October 18th remained unconscious, cyanosed and rigid for so long that death was expected.

On October 19th, 1918, I met Dr. J. H. Utley and Dr. William A. Edwards in consultation, and, operation being agreed upon, she was admitted to the California Hospital under my care.

Condition on Admission.

The patient is a fairly well nourished child of 7 years, mentally bright to the point of precocity, over-restless, and inclined to laugh hysterically, good tempered, walks "pigeon-toed," the right foot being more inverted. The optic discs have clear, sharp margins; the temporal sides are rather pale, and the veins a trifle large. Alternating internal strabismus definitely present though slight. Slight lateral nystagmus to the left seen once. Pupils normal in size and contour, equal, and react well to light and accommodation. Slight weakness of the right angle of the mouth when at rest and on voluntary movement. No other muscular weakness discernible, but, although right-handed, she is at least as strong in her left hand as her right. Sensation everywhere very keen and well localized. Slight Rombergism present. Position sense of right arm rather less certain. Arm co-ordination excellent and pointing normal. Knee-jerks equal and exaggerated. No ankle clonus, plantar reflexes flexor. Temperature 98.6°, pulse 94; weight 50 lb.

Before she was soundly asleep at night the fits began with tonic contraction of the flexors of the body, extension and adduction of the arms, and extenson of the knees with flexion of the hips. The emprosthotonos was so great that the head nearly touched the thighs. Shortly afterwards there occurred blinking movements of the eyelids, the right angle of the mouth was drawn clonically to the right, the formerly extended right wrist was clonically flexed and the convulsion spread to the right arm. The left arm and both legs remained rigid throughout. During some fits she would awaken whilst the right arm and face were in clonus, and ask to have them stopped. Often she awoke aphasic or anarthric, and then would be greatly terrified. Usually she wept bitterly on coming out of a fit; at night, if awake without having had a fit, she seemed peevish and made even "fighting and striking-out" movements. During the fit the eyes were obscured by the clonus of the lids, but it is probable that they were jerked to the right, for after the fit they moved slowly to the left, as if the opposite group of muscles were weak. The right arm was paretic after the fits, and the right side of the mouth drooped more. In less than 1 per cent. of the fits there was opisthotonus instead of emprosthotonos. These fits, solely nocturnal, occurred every ten minutes or more all through the night.

FIG. 1.—Case I, early stage. The section has the characters of granulation tissue.

FIG. 2.—Case I, later stage. The cells are more irregular in shape, size, and distribution.

FIG. 3.—Case II, early stage. The blood vessels resemble those of granulation tissue, and there are numerous polymorphs present. There are also many large multinucleated cells.

FIG. 4.—Case II, later stage. The round cells are more numerous and have a tendency to lie in rows. The large multinucleated cells are also present.

(The microphotographs were taken by Professor Adrian Stokes.)

FIG. 5.—Case I.

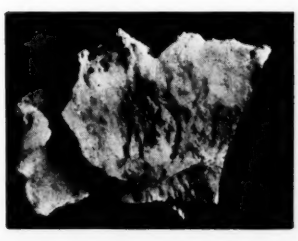


FIG. 7.—Case II, inner aspect.

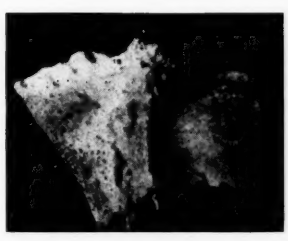


FIG. 8.—Case II, outer aspect.

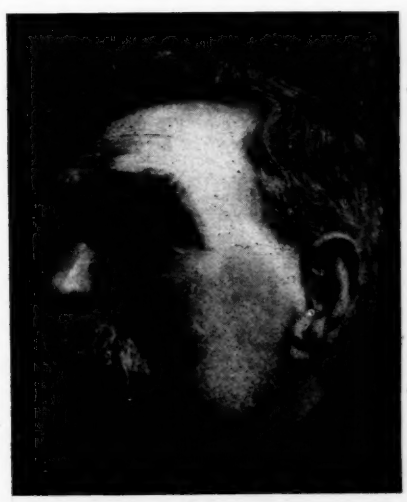


FIG. 6.—Case II.

FIG. 1.—Second, third, and fourth operations (subtemporal decompression; right osteoplastic flap; and insertion of gold tube).

FIG. 2.—Operations 1 to 5. A, Left osteoplastic flap. B, Right osteoplastic flap and subtemporal decompression. C, Gold tube. D, Trephine hole for gold tube. E, Suboccipital decompression.

FIG. 3.—Fifth operation (suboccipital incision): exposing both cerebellar hemispheres and dura covering fourth ventricle and medulla.

FIG. 4.—The patient nine months after the last operation.

BROOK: TRANSFIXION AND IMPALEMENT INJURIES.

FIG. 1.

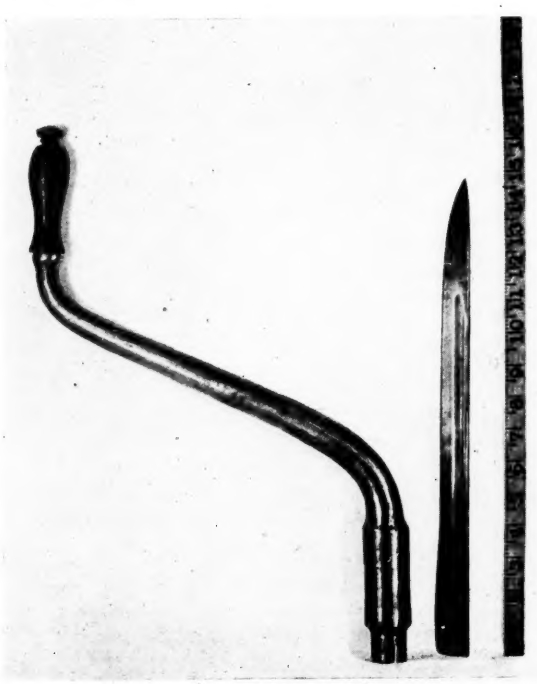


FIG. 2.

There were thus three types of fit seen, namely—

Cerebello-medullary or anterior vermis defect (tonic emprosthotonus and tonic rigidity of limbs).

Inter-peduncular or posterior vermis defect (tonic opisthotonos and tonic rigidity of limbs and alarming depression).

Left Rolandic (clonic contractions of right angle of mouth, blinking of eyelids, deviation of eyes to right, and, later, clonic flexion of the recently hyper-extended wrist and arm of the right side).

TREATMENT.

First Operation: First Stage.

October 24th, 1918, at 10 a.m. The blood pressure at time of incision was 117, and pulse 100. A bevel-edged osteoplastic flap reflected, and palpation over the left arm and hand centres revealed fluid under the dura, which was incised at the upper margin of the window; much subarachnoid oedema was evident. The blood pressure then fell suddenly from 115 to 80, and the pulse rate increased to 158. Accordingly I tied off the larger branch of the middle meningeal artery by under-running, and replaced the bone-scalp flap, leaving a thin flat rubber drain at the postero-superior angle, and returned the patient to bed at 10.55 a.m.

The shock became more profound as fluid drained from the wound, probably forced through the arachnoid by pressure. In spite of this, it seemed best to combat the shock by keeping the head low, bandaging the legs, hypodermic injections of camphorated oil, and a rectal drip of hot tea and brandy. An anxious time for about five hours. She improved until October 29th, when she had twenty fits during the night, each about fifteen seconds' duration.

Second Stage of First Operation.

October 30th. Blood pressure at commencement 98, pulse 140. Osteoplastic flap non-adherent to the dura prised up without difficulty. The dura was covered with a little fibrin. The former incision was easily recognized, and reflection of the dura was continued from the point where it had been formerly interrupted; it was very thick. A flap, comprising the whole exposed area except a thin margin around the edge of the bony defect, was reflected and retracted sufficiently to leave an area of denuded cortex a good inch wide at the sides and above when the dura was laid back upon the bulging brain. Ventricular puncture was not performed. Marked subarachnoid oedema was visible over this area and the channels that lodge the middle cerebral vessels were filled with a clear yellowish fluid. The superficial wall of arachnoid covering this marsh was incised in several places, especially just above the Sylvian point. The meningeal vessels did not bleed, but fine sutures were passed around both sides of the flap base as a precautionary measure. The cortex was washed with lotio hydrarg. perchlor. 1 in 4,000, the dura laid smoothly on the cortex, and the bone-scalp flap replaced leaving an unstuffed thin rubber cigarette drain in the postero-superior angle of the flap. Blood pressure 94, pulse 136.

This completed the second stage of the Rolandic de-duralizing operation, but it was now clear that a permanent subtemporal decompression to relieve the pressure would have to be done at the earliest favourable moment on the opposite (right) side. Largely owing to the admirable even, light ether anaesthesia by Dr. T. C. Low, the patient's condition was excellent after this operation. She was returned to bed with the head kept high, and improved until, at 2 a.m. on October 31st, there was much trembling of the right hand and arm for about a minute; had seven spasms of the old emprosthotonos type, some with the legs flexed and some with legs extended, and followed by right arm clonus and accompanied by blinking of the eyes. At 7.45 a.m. she developed anarthria after a fit. At 11.30 a.m. I found her in very good condition but complaining of pain in the right great toe. As the drainage tube was lying against the cortex in the neighbourhood of the sensory toe area I removed it, and this symptom abated very shortly. She had a good day, but that night, following a tonic (cerebellar) spasm, she had a Jacksonian attack, with definite coarse clonic contractions of the right arm, of which she was conscious throughout, asking to have them stopped. At 1 p.m. next day she had a tonic spasm, in which both eyes turned upwards. At 1.40 a.m. I found that she had a marked right-sided paralysis of the arm and angle of the mouth and was unable to speak, but understood what was said. Power of speech had returned at 4.30 a.m. At 5.30 a.m. involuntary micturition during a fit was noticed for the first time. She had four severe and twelve light fits during the night; temperature 100.4°, pulse 136, respirations 20. At 10 a.m. (November 1st), when the wound was dressed, clear fluid escaped. At 2 p.m. the arm was somewhat recovered as she had been sitting very vertically, but she looked very ill and the jaw had a tendency to drop. Slight anarthria. 4 p.m.: Deep sighing and yawning (cerebello-medullary oedema).

Second Operation.

Blood pressure 110 and pulse 120. A generous and low-situated subtemporal decompression was performed on November 1st and the dura opened to the fullest extent. A great excess of fluid, about a demi-tasse, escaped from the subdural space. The blood pressure at once rose from 110 to 130 and the pulse frequency dropped from 145 to 130. The dura was left wide open, the vertical separation in the temporal muscle brought together with catgut, the temporal fascia replaced, and a thin unstuffed cigarette drain left under the fascia at the postero-inferior angle. Blood pressure 130, pulse 130.

The patient was now turned around and, while still in the semi-recumbent posture, the left Rolandic area was further inspected. The bone flap was readily lifted and had not appreciably adhered either to the pia arachnoid or to the dural flap. The latter was quite flat and smooth but even more shrunken than before, greyer, and less congested. The arachnoid was glazed and closely applied to the pia and cortex, and there were only slight traces of blood around the margin of the skull defect. On raising the dural flap the under side was slightly sticky. Everything was replaced and the patient returned to bed at 10.3 p.m. with a blood pressure of 94 and pulse 148. Head raised.

She slept well from 10.15 until 12.30, when she had a customary emprosthotonos with both arms extended in front of the body. Slept till 1.30 a.m., November 2nd. At 2.25 a.m. a very severe Jacksonian fit began, affecting the right arm and angle of the mouth. Morphine gr. 1/20 hypodermically and bromide and chloral were given per rectum, but, until she was changed from the sitting posture and laid on the left side, the violent contractions were only checked by full chloroform narcosis and recurred when it was withdrawn. The drain was removed. After this the fits were easily controlled by chloroform. They were probably due to too rapid drainage.

These fits, in lesser degree and combined at times with those of the basal type, recurred all day on November 2nd, and in the intervals the right hand kept up a coarse tremor with the thumb flexed into the palm. The head and eyes were forcibly deviated to the right during the seizures, and she was conscious throughout many that I saw, her attempts to cry out being stifled by the spasms of the mouth and throat. Amyl nitrite and oxygen seemed of little value, but chloroform relieved at once; only in the first attack did it have to be pushed. I was ably relieved during this trying time by Dr. A. Zuber of the California Hospital, to whom I am indebted for the blood-pressure records taken during all the operations. I made the following notes at the times specified at the bedside, and they seem to be highly significant observations in regard to the fluid-pressure cause of these fits:

November 3rd, 8.45 a.m. Patient recumbent. Pure Jacksonian fit right arm and face (clonic). 4.20 p.m. Still recumbent. Jacksonian clonic fit of the right arm and eyes to the right. Speech impossible, hebetude marked. Temperature 98°, pulse 122, respirations 20. 4.45 p.m. Up on back-rest. 5 p.m. Clonic cortical fit of mouth to the right. The arm did not participate in this attack. 5.15 p.m. Still up on back-rest. Tonic basal spasm, both arms extended. No clonic. Mentally clear after it. Pulse 120, good volume. 5.50 p.m. Still on back-rest. Tonic basal spasm, followed by clonic of angle of mouth and tongue. Fully conscious of clonus and asks for $CHCl_3$, which at once arrests the twitching. Speech clearing markedly. Whole attack much milder. 6.23 p.m. Still on back-rest. Another fit, still milder.

This was the last clonic fit until November 30th, when they temporarily reappeared as described later.

It seems obvious why the cortical fits disappeared when she was raised in bed on the afternoon of November 3rd, since they vanished first from the arm, which is highest of the affected centres, and later from the mouth. The subsequent fits were tonic in character, being mild forms of what I had previously regarded as cerebellar or basal fits. The "shifting epilepsy" could only have been caused by fluid as it shifted according to posture—if one lowered the head the fits became cortical-clonic; if one raised it they became basal-tonic; and as one moved the patient they disappeared first from the higher placed centres.

On November 17th she had seven very slight and brief tonic spasms during the night; this was the best night she had had for more than a year. She was not herself aware of having had any "spells" since November 3rd.

On November 23rd the temperature at 8 a.m. was 99°. At 9 a.m. I performed a lumbar puncture under light chloroform narcosis, and with the patient recumbent upon her left side. Fluid came out under very great pressure. In all less than

20 c.cm. were allowed to escape; it was quite clear and colourless.

There was no ill effect afterwards on this day, although the temperature rose to 99.4° and the pulse to 104 in the evening. It was considered safe to remove this quantity of fluid because the lack of bulging in the subtemporal region argued against hydrops ventriculi—a condition which, when present, would render lumbar puncture dangerous—and also because the subdural location of the fluid found at the second (the subtemporal) operation gave the assurance that the intrathecal pressure was due to a pond under the cerebellum.

On November 24th, 1918, she had only three very slight spasms. There were no fits of any kind on the night of November 27th, and she slept well.

Report on Spinal Fluid.—Cell count: 2 mononuclears per 1 c.mm. Butyric acid test: Negative with 0.2 c.cm. spinal fluid. Wassermann test: Negative; 1 c.cm. spinal fluid produces no fixation with 1 unit of complement.

The trouble began again on November 30th with seven fits; five light, two severe. December 1st: Six fits last night (basal type). Discs normal; no congestion of the retinal vessels. Urine highly alkaline, otherwise normal. December 2nd: Ten fits last night (basal type). December 3rd: Eleven fits. On December 4th the fits had again assumed a cortical-clonic character, and at 7 a.m. next day I found her comatose with eyes deviated to the right, but the limbs at rest, and was informed that these urgent symptoms had been present for half an hour; also that she had had severe opisthotonos. She soon developed myoclonic shocks of the left arm, hand, and face, and the head and eyes were severely jerked to the left. Throughout this attack, which lasted about twenty minutes, and until she was under chloroform, the right side remained passive; the right side had been clonically convulsed before the first operation.

While she was under chloroform I performed a lumbar puncture between the fourth and fifth lumbar spines, and the fluid oozed out slowly drop by drop, so that in ten minutes I had only collected 3 c.cm. of clear fluid. It was therefore under greatly reduced pressure. I now put the needle well into the theca between the third and fourth spines, but no fluid came. I had felt the needle puncture the dura as usual, and the stilette found the needle clear, so that it was evidently a genuine "dry tap." At the same time it was noticeable that the subtemporal region on the right side was very tense.

The opinion was formed that an acute accession of internal hydrocephalus had followed the valve-like closure of the ventricular outlets, especially the foramen of Magendie. In other words, the insufficient relief of the external hydrocephalus had secondarily brought about a condition of internal hydrocephalus, which in turn displaced the fluid of the cisterna basalis upward and corked up the foramen magnum. It will be remembered that at the previous lumbar puncture the fluid was under high pressure, and remained so in the spinal theca after the needle had been withdrawn. It was now discovered, during the semi-lucid period, that she was hemiplegic on the left side, the leg being only slightly affected.

Third Operation.

She was removed to the California Hospital, where I enlarged the subtemporal decompression. The adhesions between the cortex and the temporal muscle were so firm that they could not be separated without haemorrhage. It was possible, however, to continue the enlarging with rongeurs from the edge of the old opening. Above this decompression an osteoplastic flap was cut with its base upward, the two sides being made with a Gigli wire saw, which was easily passed up to the drill holes from the large opening below, and on breaking the flap upwards an excellent hinge was obtained in the upper parietal region. The dura bulged, and pulsation was not observed. Reflection of the dura revealed considerable general pressure and much subarachnoid fluid, which flowed away freely after the arachnoid had been opened at the lower part of the flap and just above the old subtemporal adhesions. The dura was left open, being laid back upon the brain under the osteoplastic flap, but in the temporal region a large strip of dura was brought through the temporal muscle and stitched to the deep aspect of the skin flap in the hope of increasing the drainage. Two rubber cigarette drains (unstuffed) were left in contact with the temporal cortex and brought out externally. Blood pressure was 105 mm. at the commencement and at the end of the operation, and the pulse 120 to 140.

There was no vomiting after the operation and consciousness was soon regained, her mental condition becoming excellent. Immediate and profuse flow of cerebrospinal fluid necessitated frequent change of outer dressings during the night. There were no fits of any kind this night and she slept well. On the morning of December 6th, while sitting up, she had a severe *grand mal* attack, lasting a minute and a half. This ceased, and was not repeated when she was placed recumbent, and was evidently due to too rapid drainage. The drains were removed at noon. She remained in excellent condition (lying down) and slept from 6 p.m. till 8.40 p.m., when she had a slight spasm. Next day, at noon, there was a spasm lasting two minutes, and another at 4 o'clock. At 5.30 a.m., while still lying low, she had another fit, cortical-clonic in character, the convulsions of the mouth continuing after she awakened. I gave instructions to raise her to a sitting posture; the twitching promptly ceased, and the speech, which had been much affected for more than an hour, returned and she lost the dysphagia. It was now more obvious than ever that we had to maintain a balance between the fluid accumulating at the base and that collecting at the vertex, according to symptoms. I left standing instructions that if, after a fit, the colour was bad and there were signs of collapse, she was to be placed in the recumbent posture; if the colour and pulse were good but the speech thick and the mind dulled, she was to be propped up. This had a good effect, and at 10 a.m. she was as bright as usual.

Fourth Operation.

The fourth operation was performed on December 7th. Somnoform and ether was administered by Dr. T. C. Low. Blood pressure 108, pulse 145. A quarter-inch trephine hole was made over the posterior end of the right superior temporo-sphenoidal convolution, and another small hole made with the perforator of a Hudson drill about half an inch lower. By passing a protector between the bone and the dura this second small hole was reamered out so as to fit exactly the central part of the female half of the wide-bore flanged gold tube (14 carat). The dura was now cut in a circle as large as the drill-hole, and the female half of the tube passed from the subarachnoid space through the dura and the drill-hole in the bone; the male half of the tube was screwed home, so that the bone and dura were clamped, not too tightly, between the two flanges. In view of future growth enough space was allowed to sew the periosteum and some loose tissue between the male (external) flange and the outer table of the skull. During the insertion of the female or inner half of the tube a fine thread was fitted through a hole in the flange in case the tube slipped during insertion; this thread was removed as soon as the tube was well home. The whole procedure was made more difficult by the increased intracerebral pressure existing at this time, but as this was not very excessive I did not tap the ventricle, preferring puncture of the corpus callosum when driven to it. Moreover, I was working on the principle that if the external hydrocephalus were permanently relieved the internal hydrops could take care of itself, as there was reason to believe that the iter and foramen of Magendie were patent as long as the fluid was being absorbed with sufficient rapidity external to them. The patient was returned to bed at 12 noon, with a blood pressure of 116, and pulse 156; good volume. Diastolic pressure, 78.

Since this operation the patient has never had another cortical-clonic fit, with one doubtful exception on December 17th. The scalp healed promptly over the tube, which did its work well in combination with the dural valve in the subtemporal region, for fluid was evident in the loose cellular tissue of the scalp at the time of the fifth operation (suboccipital) described below, and marked oedema of the right side of the face was periodically visible as late as January 10th, 1919.

There were no more fits of any kind, either day or night, until December 12th, and during these five days of freedom and absorption the temperature was normal in the mornings and averaged 99.6° F. in the evenings; pulse 110. The decompression did not bulge. The nose bled once.

On December 12th, at 3.40 a.m., while sleeping and fairly low on the pillows, she had a slight tonic basal spasm, and at 10 a.m. her articulation was temporarily affected but her mentality bright as usual. December 13th: A good night and very bright and cheerful; slight epistaxis. December 14th: A good night and no more spasms. December 15th: A good night, though slightly more restless; bright all day. On December 16th slight basal spasms reappeared, and on December 17th, at 5.35 p.m., she had in my presence, while awake and lying low in the bed, a purely basal tonic spasm lasting 35 seconds. In this the head approximated the thighs, as in the initial basal element of her pre-operative fits. Lumbar puncture revealed fluid under strong pressure, but not so strong as on November 23rd. (It will be remembered that on December 5th the spinal theca was practically dry.) During this night she had eight purely basal spasms. December 18th: The lumbar puncture seemed to have brought about an exacerbation of basal pressure, as she had increasingly frequent basal fits until December 20th, when I again operated.

Fifth Operation.

9.19 a.m. Operation under somnoform and ether. Blood pressure at the time of incision 104, pulse 126. The skin flaps

of Cushing's crossbow method to expose both cerebellar hemispheres were turned down with minimal bleeding; but when the patient, who was lying in the semi-prone position, was turned a little further on to the right side to permit easier reflection of the muscles, the pulse disappeared at the wrist. Accordingly, the skin flaps were replaced and covered with a dressing, the head was lowered, and venesection of the median basilic vein and saline infusion of the median cephalic vein were performed. The collapse, probably due to a cerebellar fit under the anaesthetic, occurred at 9.36 a.m., and by 10.20 a.m. the operation could be resumed with the patient's blood pressure 98 systolic, 50 diastolic, pulse 110. The cellular tissue of the scalp over the occiput was found on incision to contain considerable fluid from drainage out of the openings above the tentorium previously described.

The patient being placed now in an almost upright sitting posture, a trephine hole was made to the left of the occipital sinuses and just above the margin of the foramen magnum. The bone was further removed with rongeurs and the de Vilbiss forceps until the posterior half of the foramen magnum had been taken away, the dura over the medulla, fourth ventricle, and occipital sinuses fully exposed, and both cerebellar hemispheres denuded of bone within the limits of the superior curved line. The dura was more adherent to the bone than usual and in places appeared thickened. Pulsation was not readily felt or seen, and upon incising the dura the arachnoid was found to be adherent to its deep aspect. Much fluid between the dura-arachnoid and the cerebellar substance obscured the latter from view even in the highest part of the wound, a bluish thin-walled sac of fluid coming into view, upon opening which much fluid gushed out.

The blood-pressure records (mm. Hg) and pulse rates are as follows:

A.M.		Systolic.	Diastolic.	Pulse.
10.35.	Before opening skull	92	50	130
10.39.	After opening skull	100	50	102
10.49.	Bone removal complete ...	92	58	140
10.51.	Dura reflected	96	50	120
11.15.	Subsequent manipulations...	84 (lowest)	50	124
11.18.	Wound closed	96	52	140

The dura was fully opened over both cerebellar hemispheres, leaving intact that over the occipital sinuses. The dura covering the fourth ventricle was not incised, as it was felt that the posterior medullary velum would, in this case, allow the discharge of fluid from the ventricle when its lateral supports had been removed. Accordingly, a large flap of dura-arachnoid was turned upwards on the left side and brought through a slit in the upper fringe of complexus muscle and stitched to the fascia covering the occiput just above. Upon attempting to do the same thing on the right side by turning a dural flap outwards, the dura here was found to be so friable that it would not hold a stitch, and so, time pressing, the rest of the dura was everywhere left wide open as it was, and the muscles were brought together by iodized catgut suture. The wound was closed without drainage.

The condition that had been found was therefore a posterior basic meningitis, evidenced by thickened dura, adherent arachnoid, excessive subarachnoid fluid, and fine strands and adventitious vessels bridging across between the pia and arachnoid and dura. No tubercles were seen.

From this time on the progress has been uneventful, and the temperature has been normal since March, 1919. In June, 1919, the weight was 69 lb. She is the brightest child mentally I have known. In January, 1920, the report was received that she has remained in perfect health and with increased mental development. There have been no fits of any kind since December 22nd, 1918.

OBSERVATIONS.

I have reported this case in great detail because of its rare nature and because of the physiological points brought out.

In regard to its apparent rarity, Professor Thomas M. Rotch, in his *Pediatrics* (1901), says: "Both the congenital and acquired forms of external hydrocephalus are so rare that they need not be more than mentioned . . ." In *Diseases of the Nervous System*, by Jelliffe and White (Lea and Febiger, 1917, p. 559), there appears the statement that "External hydrocephalus, synonymous with serous meningitis, is, as an entity, infrequent," and the better known fact is also mentioned that "in chronic hydrocephalus, contractions and partial and general spasms are of ordinary occurrence."

The title of this paper requires a few words of explanation in regard to its various elements.

I believe that there was a loculated serous meningitis of the left Rolandic area where the first craniectomy revealed a subarachnoid accumulation of fluid, because the child's first symptom was a paraesthesia of the right hand, followed in a few days by Jacksonian epilepsy of the right hand and, later, the right arm. In this respect the case was identical with Case 4 and Case 6 which I reported in *International Clinics*, vol. 3, series 28, 1918, under the title "The operative treatment of chronic polio-encephalitis superior"; these were cured by craniectomy over the affected area alone, leaving the dura open. This same procedure had a similar beneficial effect in the present case as regards the Jacksonian fits of the right arm, some time before the other types of epilepsy had been abolished by the combined subtemporal and suboccipital deduralizations.

F. Krause (*Surgical Operations*, 1917, vol. ii, pp. 496-499, reports a case similar to Case 6 of the paper referred to above) except that Krause's patient suffered three fits a month, whereas mine had twenty fits per night. Fluid was also found by Krause, who performed Kocher's valve-flap operation, with a resulting immunity from fits for at least six months, after which the patient was lost sight of.

The first element of the title, "infective external hydrocephalus," needs but little elucidation, for it is self-evident from the clinical notes, but emphasis may be placed on the large amount of fluid found in the middle fossa during the second (the subtemporal) operation, and in the posterior fossa during the fifth (the suboccipital) operation, as well as in the spinal theca on November 23rd; also upon the shifting character of the epilepsy, especially on November 3rd between 8.45 a.m. and 6.23 p.m., when it was well demonstrated that raising the patient to a sitting posture caused the fits to change their character and disappear in such order that the centres that were posturally highest were the first to be relieved from the spasms. Moreover, after 6.23 p.m. on November 3rd, when the fits ceased in response to the change of posture, there was no recurrence of cortical fits for twenty-seven days. It is difficult to imagine any other cause than shifting of fluid to account for such a disappearance of these symptoms and particularly on such a sliding scale. Moreover, confirmation was also present in that hebetude and aphasia rapidly disappeared when the patient sat up.

This does not tell us whether the fluid produces convulsions by mechanical pressure upon the blood vessels, causing anaemia of the cortex (which is my belief), or whether it acts by virtue of its abnormal chemical constitution. It appears certain that children more readily than adults react to varied intracranial pressure by convulsions, and convulsions are commonly observed a considerable time before the other signs of pressure appear in children.

Sir Charles Ballance (*Some Points in the Surgery of the Brain*, 1907) describes diffuse external hydrocephalus as follows (p. 46):

"In the subdural space, which is not divided into compartments, a pond of fluid will form, while in the subarachnoid space of the cortex the tissue under normal circumstances being traversed by countless rivulets of fluid (like marshy ground) will become oedematous and swollen."

This work does not mention polio-encephalitis as a cause for some of these conditions, but Krause mentions the likelihood in his works, and a good description of some of the symptoms attributed to this cause can be found in the article on epilepsy by the late Sir William Gowers in *Quain's Dictionary of Medicine*.

I believe that the internal hydrocephalus, which she must have had during the basal and cortical fits on December 5th, when the spinal theca was found almost dry, the subtemporal hernia bulged, and inadequate supratentorial drainage had been established for a month, was secondary, thus:

Fluid accumulated beneath the tentorium until, for example, the foramen of Magendie was occluded, the back pressure being assumed capable of causing a temporary valve-like closure when the posterior medullary velum was sticky with inflammatory products. Then, more fluid being formed within the ventricles by the choroid plexuses, the cerebellum was forced downwards and the fluid in the cisternae magnae and basalis displaced upwards to the cortex, which at first could accommodate it, the former operations also giving egress to the subdural space and to the subcutaneous tissues from the subarachnoid level, but later the cortical region became overburdened and the clonic fits reappeared. By this time the medulla had corked up the foramen magnum, and the fluid in the spinal theca was absorbed by the spinal veins and lymphatics at the time when I failed to get more than 3 c.cm. by puncture; hence the urgent condition of the patient, the severe basal spasms and the return of the cortical fits on this date, all of which were relieved by enlarging the subtemporal decompression, turning back a flap of dura through the muscle and inserting a gold tube.

It is clear why absorption of the fluid was arrested in the first place, since at the subsequent (fifth) operation it was found that the arachnoid was adherent to the dura all over the posterior fossa. Without doubt removal of one

half of the foramen magnum improved the venous circulation, and gave "elbow room" to the fourth ventricle.

In seeming contradiction to the above theory is the fact that on November 23rd I removed 20 c.cm. of fluid from the spinal theca under great pressure, and thereafter she had no fits of any kind for four days; but this contradiction is only apparent, because the fluid was still coming out in a continuous stream when I withdrew the needle, so that just enough fluid was removed, and not too much—that is, not so much that the medulla should sink into the foramen magnum; whereas, on December 17th, when the pressure in the spinal theca was less, removal of 15 c.cm. of fluid did increase the basal fits.

A similar mechanical condition to the above seems to have occurred eventually in a case of primary internal hydrocephalus reported by Dr. Sutherland and Sir Watson Cheyne in the *Transactions* of the Clinical Society of London, based on experiments by Dr. Leonard Hill (*Physiology and Pathology of the Cerebral Circulation*), who states:

"If we could only establish a permanent communication between the ventricles and the subarachnoid space, then no matter how much fluid is poured out into the ventricles it would be at once absorbed and carried off by the veins of the subarachnoid and subdural space, and thus all injurious pressure intra- or extra-cerebral would be removed and the brain would be free to develop if it could."

Accordingly, Sutherland and Cheyne put the ventricle of a six months old hydrocephalic child into communication with the subdural space by means of a bundle of catgut which was left within the skull and the scalp closed.

The hydrocephalus greatly diminished, but the child showed no improvement in intelligence, and nine weeks later developed symptoms of basal meningitis, dying twelve weeks after operation. Necropsy showed the ventriculo-subdural drain patent and free from inflammation, the ventricles not distended, but a pool of fluid in the subdural space. The authors add that "expansion of the brain, the factor necessary for the removal of the fluid, had not taken place." The veins had not taken up the subdural fluid as Dr. Hill asserts is normally to be expected, owing, I suspect, to the basal meningitis spoken of above, and possibly for this reason the brain did not expand.

The patient whose case I have recorded had an extracerebral pool of fluid at every operation, and certainly the brain was then and is now well "expanded," but in spite of the palliative effect of the various supratentorial measures her symptoms did not disappear until the inflamed dura and arachnoid had been completely and permanently reflected from both cerebellar hemispheres. In regard to the original cause of the posterior basic meningitis and the localized serous meningitis of the left cortex that was discovered in this case it will be remembered that within a few days after the removal of inflamed and pus-laden tonsils she cried out in her sleep for several nights—an unusual thing for her—and within a month she began to complain of itching in the right palm, which was followed by the Jacksonian fits. It seems highly probable that a septic thrombus in the tonsillar branch of the ascending pharyngeal artery was carried off into the more distal posterior meningeal branches of the same vessel; and more septic matter may have been conveyed via the middle meningeal or middle cerebral to the left Rolandic area. I have no doubt that the tonsils are responsible for many such infections, although it is curious that the left Rolandic area should be so often the first to show symptoms of the infection. One moral is to render all tonsils as clean as possible before removal.

It may be asked why I did not perform a suboccipital decompression in the first instance in this case. The first and most weighty reason is that I have usually had greater shock with the suboccipital operation than when operating above the tentorium. In the four supratentorial operations upon this child not more than 1 oz. of blood in all was lost. The second reason is that I am by no means convinced that in cases of epilepsy having Jacksonian characters any mere decompression ever suffices to effect a cure, and believe that the most favourable outlook is produced by leaving a large dural flap wide open over the area indicated by focal signs. The dura eventually regenerates, as I have demonstrated elsewhere. The third reason is that as regards the type of fit that has been designated "basal" in this case, I have known these to clear up completely after the safe and simple subtemporal decompression of Cushing.

I reported such a case in the *California State Journal of Medicine*, November, 1914, under the title, "Decompression in acquired hydrocephalus." The fits were identical with the opisthotonic ones of the present case (L. H.), and the trouble had progressed to almost total blindness before operation cured both conditions.

For these reasons, in the case of L. H. I did not approach the base until compelled to do so by a process of exclusion. Again, the osteoplastic flap causes the least deformity, leaves no permanent weakness of the skull, and will cure some at least of the most severe cases, even when the Jacksonian fits do not comprise the whole clinical picture, as was the result in Case 6 of my paper already referred to (*International Clinics*, 1918, series 28, vol. 3), in which the whole operation was completed in one stage without shock—a procedure generally inadvisable, as the two-stage operation allows more gradual adaptation of the vital centres to the alterations of pressure.

Ballance, in his work already referred to, speaking of the attitude of the head in cerebellar lesions, says: "Also the head may be retracted or the chin depressed on the chest; the anterior or posterior part of the vermis is then probably involved." This is in accord with Pagano's experiments on animals, in which he found that stimulation of the anterior part of the vermis caused the head to look upwards and the subject to fall backwards, whereas stimulation of the posterior vermis brought the chin down on the chest and caused a falling forwards.

Several additional points of moment have been emphasized in the course of this case, three of which I have noticed in previous cases.

First, that the greatest shock of most brain operations is apt to occur after the skull is opened for the first time. When the intracranial contents have had a few days to become accustomed to the change of pressure, the brain can be judiciously attended to without much fear. In this connexion one is reminded of the views of Leonard Hill on the influence of atmospheric pressure, and, in spite of the statement of so experienced a cerebral surgeon as Sir Charles Ballance that no profound changes are observed upon first opening the skull, my experience from careful blood-pressure records has been that stage 1 is the only time in many operations that I had any cause to fear a sudden depression. I have never lost a patient from operation except from one cause—to wit, doing too much at stage 1, so that it became necessary to enforce recumbency to combat shock at a time when the mechanical conditions within the cranium called loudly for a sitting posture. I think that more stress should be laid on the question of posture both during and after cranial operations.

In none of the subsequent operations upon L. H. was there any disturbing shock due to the surgical procedure, and even after the suboccipital operation, which is usually considered a severe measure in a debilitated patient, her condition was excellent, because I believe there was a decompression above the tentorium that allowed the atmosphere to follow the changes in the fluid pressure and intracranial bulk. Thus, after I released the large amount of fluid from the cisterna magna, any fluid that followed it from the fourth ventricle could be replaced without tension by that from the third and lateral ventricles, for the atmosphere was able to press into the subtemporal region. The chief danger, therefore, of brain surgery lies in alterations of pressure, positive and negative. I have met with severe but not fatal shock under similar circumstances in at least three other cases of extracerebral fluid upon which I operated.

The next point is that cortical-clonic fits appear to be produced not only by too much fluid but by too rapid drainage of fluid from the cortex into the basal cisterns, as may be inferred from a reference to the events that occurred on November 2nd at 2.25 a.m., and on December 6th. In this connexion also Harvey Cushing speaks of convulsions caused by loss of cerebro-spinal fluid after his ventriculo-abdominal drainage (Keen's *Surgery*).

Fourthly, it is not always possible to obtain adequate drainage and decompression of the entire cranial cavity by any operations above it. Fifthly, the arachnoid of the great cisterns is most important for the absorption of excess fluid, but can be replaced by muscles.

It is evident that an accurate knowledge of the pathology of many of these conditions can only be obtained by exploratory operation, since fluid that would be obvious upon the brain during life is usually absent in the *post-mortem* room.

TREATMENT OF ASTHMA BY AUTOGENOUS STREPTOCOCCAL VACCINES.

BY

SIR LEONARD ROGERS, M.D., F.R.C.P., F.R.S., I.M.S.(RET.).

PHYSICIAN AND LECTURER, LONDON SCHOOL OF TROPICAL MEDICINE; LATE PROFESSOR OF PATHOLOGY, CALCUTTA.

MANY workers have recorded favourable results from the vaccine treatment of asthma, especially in the bronchial type of the disease. During my last seven years in India I used the method extensively in Bengal, where asthma is so common and difficult to treat, and I have already recorded favourable results in 13 cases[1] from the use of autogenous streptococcal vaccines made from cultures from the sputum. Since that time I have treated, and followed up by correspondence as far as possible, a further larger number of cases, and am now able to record a second series of 40 cases. As it would be tedious to describe them in detail, I have classified them to bring out the degree of benefit and the duration of the effects obtained.

The method consists simply in making cultures from the sputum, preferably that obtained during or soon after an attack, subculturing a number of colonies of streptococci, including any short chain pneumococci, so as to include a number of strains, and making up a vaccine of the strength of 100 millions in 1 c.cm., which can be conveniently put up in one of Wright's small rubber-capped bottles. The initial dose is $\frac{1}{4}$ to $\frac{1}{2}$ c.cm., and as soon as little or no reaction ensues it is rapidly worked up to 1 c.cm. weekly, and after several such doses to $1\frac{1}{2}$ to 2 c.cm., the larger doses being given at intervals of ten days. If any marked reaction or temporary increase of the symptoms occurs the dose should be decreased to one-half and cautiously increased again when no reaction follows an injection. The treatment usually has to be continued for two or three months and sometimes longer, several injections being given after definite improvement is observed to obtain more lasting results. There has been no selection of cases, all those treated since my last paper appeared up to within one year of leaving India, and followed up for several months to allow sufficient time to enable the results to be judged, being included.

The patients may be conveniently grouped in the following classes, beginning with the failures, continuing with those who obtained only temporary benefit, and ending with the patients who were very greatly improved or quite well when last heard of, the last class being subdivided into those who had not been followed up for a complete year and those in whom the benefit had persisted for from one to four years.

I. *Failures.*

They number 6 out of 40, or 15 per cent.

In 2 severe reactions without benefit occurred; in one of them the symptoms appeared to be anaphylactic in nature.

In 2 no effect was produced, but one of these only had three injections and could not be followed up, so the treatment did not get a fair chance. In one much benefit followed for five months, but was probably due to a change of climate, so it is included among the failures as he relapsed. In one some benefit followed, but he was cured later by nasal cautery. On the other hand, I have seen several other cases in which nasal treatment failed, but vaccines were subsequently successful.

II. *Good Immediate Effect but Relapse within One Year.*

This was observed in 7 cases, or 17.5 per cent.

In 2 the relapse was as severe as before, although seven and ten months' relief respectively was afforded. In one much relief was afforded for nine months, and further benefit resulted from a second course, although the patient was aged 65 and had had asthma for ten years.

In 4 slight and less frequent attacks recurred after from five to nine months; chills brought on the attacks in two instances, but the patients were very much pleased with the great relief afforded them, although it was temporary in two and partial in the remaining three.

III. *Good Effect for a Year or More, but Subsequent Relapse.*

This occurred in 6 cases, or 15 per cent.

In one a slight relapse occurred after a wetting at the end of a year's freedom. In one after twenty-six months' freedom a relapse followed a wetting, but the patient kept well again later. In one a relapse occurred after influenza, and the later history is not known. In two a relapse was followed by freedom from asthma or greatly lessened severity of the disease for further periods of one to two years.

Thus in all these cases very great benefit of from one to three years' duration resulted.

IV. *Good Effects up to Six to Nine Months when Last Heard of.*

The number of cases in this series was 5, or 12.5 per cent. In all the immediate effect of the treatment was very satisfactory, although they could not be followed up for long; in view of the results obtained in the next series, there is, however, every reason to believe that in most cases in this class (IV) the relief was also of considerably longer duration. All except one were chronic cases.

V. *Good Effect Maintained for at Least One to Four Years.*

Considerably the largest number, 16 cases, or 40 per cent., fall into this most satisfactory class, in which complete or almost complete relief was afforded for a long time. Thus, when the patients were last heard of, the benefit had in 9 instances lasted one to two years; in 3 it had lasted two to three years; and in 4 from three to four years.

That Class V was not by any means composed of early or favourable cases will be clear from the following data:

The average age of the patients was 40.5 years.

The average duration of the disease was five years.

The average duration of the treatment was three months.

These results appear to me to be very satisfactory, especially when it is remembered that the patients were all treated in the extremely trying, damp, hot climate of Lower Bengal, which is notoriously unfavourable to asthmatic patients, as pointed out in 1886 by Norman Chevers. Many of them were very liable to colds and bronchial trouble, and these conditions also were much relieved. Only patients with well marked asthma are included in the above series, the bronchial type of asthma being the prevalent one in Bengal.

In view of favourable reports on the use of intravenous injections of peptone in asthma it occurred to me that my vaccines might contain an appreciable dose of peptone; but analyses kindly made for me by my colleague, Major Shorten, I.M.S., Professor of Physiology, Calcutta, excluded this explanation of my results. They therefore appear to be due to immunization against the streptococcal group of organisms, which are so frequent a cause of bronchial and throat infections, and a common excitant of asthmatic attacks in persons liable to them. I have not attempted to isolate and differentiate separate colonies of this wide group of organisms, as I believe the simpler plan of using a number of colonies to make subcultures from the original culture tubes for preparing vaccines is more satisfactory; it can readily be carried out in any small bacteriological laboratory, and has furnished results in my hands which have been most satisfactory to the majority of my patients.

CONCLUSIONS.

1. In 15 per cent. of the cases the treatment failed to give material relief of a lasting nature.
2. In 32.5 per cent. great relief was afforded, but it was either not permanent or it was incomplete.
3. In 52.5 per cent. the patients remained well when last heard of from one-half to four years after the treatment.

REFERENCE.

[1] *Practitioner*, June, 1915.

TRANSFIXION AND IMPALEMENT INJURIES.

BY

W. F. BROOK, F.R.C.S., MAJOR R.A.M.C.(T.),

CONSULTING SURGEON, SWANSEA GENERAL HOSPITAL, CARMARTHEN COUNTY INFIRMARY, AND PORT TALBOT GENERAL HOSPITAL.

(*With Special Plate.*)

RECENT references to these injuries in the BRITISH MEDICAL JOURNAL, including that of the historic shaft preserved in the museum of the Royal College of Surgeons of England, encourages me to think that the following cases, one occurring in military and the other in civil life, are of sufficient interest to place on record.

Impalement on Bayonet.

The patient, a short, thick-set muscular man, was admitted in November, 1916, to Neath Section of the Third Western General Hospital, among a convoy of recently wounded from France. He presented a small bayonet wound in the right gluteal region, received six days previously, healing by primary union; beneath it was a hemispherical swelling about 3 inches in diameter, evidently a haematoma. I examined the latter carefully then, and again three or four days later, when it was diminishing in size, as its position suggested the possibility of injury to the gluteal artery. The only account vouchsafed

by the patient, who was a phlegmatic agriculturist in civil life, was that he had "sat on the sentry's bayonet."

The next I heard of the case was a few days later, when my colleague, Captain J. T. Williams, reported to me that on examining the man prior to transferring him to an auxiliary hospital, he had detected a foreign body at the site of the previous swelling. Investigation with an *x*-ray tube then revealed the fact that a portion of a bayonet blade, broken off near its base, and measuring some 15 inches in length, was embedded in the right gluteal and erector spinae masses, the point lying under the angle of the scapula (Figs. 1 and 2).

The story, which he had casually epitomized as "sitting on the sentry's bayonet," when dragged out of him amounted to the following: He was taking part in a night attack from our trenches. The party had only just got over the top when the attack was discovered by the enemy, who opened fire, and in scrambling back he had come down on to a sentry's bayonet which was leaning against the parapet. When removed the bayonet was quite bright, having evidently been cleaned only shortly before the accident.

The main interest in the case attaches to the fact, at first sight almost incredible, that a wounded man with just under fifteen inches of bayonet in his body could have found his way from the first line trenches right back to a home base hospital, and almost to an auxiliary hospital, without its presence being suspected. The chief factors contributing to such a possibility were, of course, first, the cleanliness of the sentry; secondly, the temperament, and thirdly, the build of the patient.

It was naturally easy enough when we knew it was there to feel the blade as it bridged the lumbar region, but then only by posturing him, as it lay flat against and in close contact with the iliac crest and ribs. During the day or two he was up and about before its discovery, the only inconvenience he seems to have experienced was in sitting down. This he avoided as much as possible, but walked freely about with other patients.

Impalement on Tramcar Control Crank.

In this case the patient, a young man of 26, was impaled on a tramcar control crank which traversed the rectal wall, the bladder, the peritoneal cavity, and the anterior abdominal wall except skin. He was admitted to the Swansea General Hospital on June 8th, 1912, at midnight in an unconscious state. The people who brought him knew nothing about him, except that he came from a neighbouring town, and that they had been asked to pass him on to the hospital. His general condition appeared to be due to a mixture of severe shock and alcohol. The house-surgeon, Dr. Lewis Jones, to whom I am indebted for notes of the case, found a doughy circumscribed swelling about two inches in diameter in the abdominal wall, three inches within and two inches above the left anterior superior spine. He further ascertained that the bladder was empty. In spite of the collapsed condition of the patient immediate operation was decided upon. The swelling proved to be a mass of small bowel covered only by skin, which had herniated through a recent laceration in the peritoneum, muscles, and fasciae. Further investigation discovered a little free fluid smelling faintly urinous and faecal. A tear about one and a half inches in length was found to the left of the fundus of the bladder. This was sutured, the peritoneum cleaned, and the abdominal wound closed around a drain.

Attention was then turned to the rectum. A little blood was discovered between the folds of the buttocks, and an extensive lacerated wound of the anterior wall of the rectum, above the internal sphincter, leading into the bladder. The bladder was drained by catheter through the urethra and the rectum by laying open both sphincters well back towards the coccyx.

Examination of the man's trousers confirmed the obvious conclusion already arrived at—namely, that he had been impaled on some stake-like object. Twenty-four hours later it was learnt that while getting down from the outside of a tramcar in the dark he had fallen on to the cranked control on the dash-board. (Fig. 2.) He made a good recovery, except that the wound in the abdominal wall suppurated freely, a ventral hernia resulting. For this he still refuses operation.

I was able a few months ago to secure the actual control crank upon which he was impaled, which is well shown in the photograph. (Fig. 2.)

THE PHYSICAL BASIS OF SOCIAL INEFFICIENCY.

BY

R. J. A. BERRY, M.D., F.R.C.S., F.R.S.EDIN.,

PROFESSOR OF ANATOMY IN THE UNIVERSITY OF MELBOURNE.

IN a monograph entitled *Intelligence and Social Valuation*,[1] by Mr. Porteus and myself, we ventured to assert, as the result of a long and extensive research, that it was now possible, in a limited number of cases—but particularly in the so-called mentally deficient—to determine the relative state of development of the cortical layers of the cerebrum in the living subject. While this claim has not been seriously controverted—possibly because it has not yet become widely known—it is certain that some of our critics have failed to understand how even this limited claim can be true of the individual. In view of the practical importance of the subject, it would appear advisable to furnish some explanation of certain points dealt with in the monograph referred to.

There is no part of the human body where function is so directly dependent on structure as the central nervous system. The neurone doctrine has very profoundly altered our conceptions of the working of the nervous system. Recent research has gone even further, and has created something like a revolution. The busy practitioner has neither the time nor the opportunity for following the stages of these scientific advances, and hence their accumulated findings suddenly come as something of a shock. I propose therefore, briefly, and probably very imperfectly, to endeavour to furnish an outline of these changes, particularly in so far as they concern the physical basis of social inefficiency.

The human brain is made up of peculiarly modified nerve cells and processes, termed neurones, embedded in neuroglia. The former are developed from neuroblasts, and the cells of the latter from spongioblasts. Prior to the time at which the two groups can be distinguished from each other they are spoken of as indifferent cells. The development of these cells into neuroblasts and spongioblasts does not occur in all cells simultaneously, some being more precocious than others. Further, the spongioblasts develop somewhat in advance of the neuroblasts, and there is not infrequently found a fairly complete spongioblastic framework having as yet no differentiated nerve cells or fibres. Should this condition persist into adult life, it is clear that there will result a large, heavy brain with an excess of neuroglia, an insufficiency of neurones, and a consequent lack of intelligence. On the other hand, should the neuroblastic development exceed the spongioblastic, there will result the large, heavy, multi-neuroned brain of high intelligence. Developmentally there are therefore two types of large and heavy brain—the multi-neuroned brain of superintelligence, and the multi-neuroglial brain of average intelligence or even stupidity. These two types must no longer be confused, though a study of some of the most modern physiological and anatomical textbooks would appear to show a confusion of thought on the subject, and a lack of appreciation of the clinical support given to the developmental truths herein enunciated. The large, heavy brain of a bricklayer, quoted in the works referred to, is, of course, an instance of the multi-neuroglial brain with an insufficiency of neurones.

The neuronic conception of the brain has become so important that it is now more usual to think of that brain in terms of neurones and neuronic reflex arcs than in the obsolescent lobes and convolutions of former times. That the cell body and dendrons of the neurone are the source, under suitable stimulation, of the energy displayed by the nervous system is undoubted, as is also the fact that, if a human individual possess a diminished number of neurones, or imperfectly developed neurones, he will be incapable—just as is the microcephalic idiot—of the same "intelligent" action as the more fortunately endowed individual. Just as with electric action, an insufficient number of batteries, an imperfectly connected series of batteries, or an improper insulation, give indifferent results, so also is it with the human central nervous system. An insufficient number of cell bodies, an imperfectly connected series of neurones, an insufficient number of collaterals, or an imperfect medullation of axons, especially within the white matter of the brain and cord, give imperfect

results as regards the display of "intelligent" action. All these facts, provided there has been no compensating over-development of spongioblasts into neuroglia, also denote a smaller brain.

It is unfortunate that a certain school of psychologists discuss "mentality" as though it had no physical basis, whereas the formula is "no neurone, no mentality." The intellectual activities of the individual are entirely dependent on the number of normally developed, connected, and insulated neurones, and all the neurones which the individual is to possess are present, in an immature condition, at birth, gradually assuming functional activity with growth, medullation, and collateral connexion. It follows, therefore, that any process which tends to interfere with the proper growth and development of the neurone has an extremely serious result, not only on the individual but also on those with whom he comes in contact. Amongst the causes which interfere with the proper growth and development of the neurone are lack of oxygen from interference with breathing, as from adenoids, chronically enlarged tonsils, long confinement in improperly ventilated rooms; hookworm, which reduces the haemoglobin; many poisons, particularly alcohol and syphilis, and other less well-known pre-natal and post-natal factors. Amongst the agencies of destruction of normally developed neurones the best known are old age, chronic alcoholism, and syphilis. Breeding from neuronic underdeveloped stock (mentally defective stock) is the most powerful method of continuing the evil, as if both parents are mentally deficient there is no escape for the offspring.

Different groups of neurones fulfil different functions. The known functional areas of the cortex occupy but a relatively small area, and are surrounded, like islands, by the very much larger association areas. The presence of the latter is one of the most striking features of the human brain, and it is certain, both from their structural neuronic connexions, as also from experimental and clinical lesions, that they play an important part in the production of those higher psychic phenomena which distinguish Man from any of the lower animals. The association areas are the true cortical areas of thought and of all that that implies. Were Broca's conception of a definite cortical speech centre true, it would be possible to educate a higher mammal to speak. That this is not possible is due to the fact that association centres are not present to any extent in the lower animals, and hence the absolute certainty that the mechanism of speech is a much more complex neuronic series of connexions than was supposed by Broca, and that it includes some portion of the association areas, in addition to the occipital end of the third frontal convolution.

Whilst it is undoubtedly true that different portions of the cerebral cortex fulfil specific functions, it must not be forgotten that, structurally and functionally, different parts of the brain are so intimately connected as to make it not improbable that injury or developmental defect in any one part may influence prejudicially the functional value of all other regions in the brain. The generalized idea of a localization of function has long been accepted, but the modern view is that the human cerebrum is composed of a plurality of organs, not completely separated from each other, but intimately associated, and to a certain extent dependent on one another for their functional importance. So far all attempts to localize the functional activities of the brain have had reference to planes of separation *vertical* to the cortex, but the most recent work on the lamination of the cortex makes it probable that it is also necessary to consider the separation of function along the *horizontal* planes of the cell layers of the cortex, because these layers certainly appear to perform quite different psychical functions. This work and its far-reaching consequences may now be considered.

In the post-central gyrus—a gyrus of afferent nerve terminations—there are, histologically, eight layers, the fifth of which is a granular layer, in which most of the afferent nerves have their terminations. This granular layer represents the original external cortical layer of the mammalian brain, and hence the dictum that the neopallium of the mammalian cortex is primarily built up on an infragranular basis, that is, of pyramidal and other cells lying deep to the granular layer. In the higher animals, and particularly in Man, those pyramidal and other cells lying superficial to the granular layer are a more recent evolutionary addition to the cerebral cortex, and subserve different and altogether higher psychic functions than the ontogenetically and phylogenetically older infragranular series of pyramidal cells.

The infragranular layer of the cortex, or the middle fibre lamina and inner cell lamina of polymorphic cells, comprises the deep large pyramidal cell layer, the deep medium-sized pyramidal cell layer, and the polymorphic cell layer of the histologist. In every human individual this infragranular layer of the cortex is the first to appear and the first to attain maturity. It subserves the lower voluntary and instinctive activities of the animal economy, and thus forms a lower level basis for the carrying on of cerebral function. It is absolutely and relatively as well developed in the higher animals as in Man, and is developed equally well in the feeble-minded and in the normal individual. It is, therefore, concerned with the activities of animal instinct, such as the self-protective, the selfish, and the sexual. Shortly after birth it has attained 82 per cent. of its ultimate adult development in depth. Judgement, common sense, reason, as evidenced in behaviour, are dependent on the control of the activities of this layer by the supragranular or outer cell lamina. The layer is often actually increased in depth in such *abnormal* cases as high-grade amentia, and of chronic insanity with moderate dementia. A considerable decrease, on the other hand, exists in more marked aments, and in gross dements who are unable to carry on the ordinary animal functions, such as attending to their own wants.

The supragranular layer (or the outer cell lamina and the outer fibre lamina) comprises the molecular or plexiform layer, the small pyramidal cell layer, the superficial medium-sized pyramidal cell layer, and the superficial large pyramidal cell layer of the histologist. This layer is the most prominent feature of the human cortex, and constitutes a higher level basis for the carrying on of the cerebral functions. It subserves the higher thought processes, and is, therefore, the layer through which school "education" largely works. It is the last layer of the cortex to be evolved, the last to commence to develop, the last to attain maturity, and consequently the first to undergo retrogression. Having been, from the evolutionary standpoint, recently added, it is in a state of instability. It is the only cell layer of the cortex which varies definitely in measurable depth in *normal* brains. It is under-developed to different degrees, according to the mental capacity of the individual in persons exhibiting various grades of mental subevolution, and it undergoes degrees of retrogression which correspond to the amount of dementia existing in cases which permanently suffer from diminution or loss of mental powers.

It is thus clear that, of the various evolutionary factors which have contributed to the enlarged brain of Man, the addition of the outer cell lamina and outer fibre lamina (supragranular layer) is, from the physical and psychic standpoints, one of the most important. If it be not present, or be badly or imperfectly developed, there must be a smaller brain, with deficient or imperfect psychic or "intelligent" function, because under these conditions about a third or a half of the variously estimated 3,000 to 9,000 million neurones of the cerebral cortex are absent or are very imperfectly developed. Provided such absence is not compensated for by an increase in neuroglial tissue, there should be a smaller head, which will be revealed by head measurement. If complete individual examination, mental and physical, confirms the findings of head measurement the diagnosis becomes certain, and there is thus revealed, even in the individual, the relative state of development of the cortical layers of the brain. The exact percentage of cases in which this is possible will be referred to later.

If such be the psychic functions of the horizontal layers of the cerebral cortex—and there is no reasonable ground for doubt—it is clear that they are very far-reaching in their consequences. There is seen to be a physical basis for a large proportion of crime and prostitution; for much of the social inefficiency with which we are now confronted; for many problems of resistance to disease, and so on; and the time has surely come when these doctrines must be transferred from the laboratory to the living subject.

In endeavouring to effect this transference, the first difficulty with which Mr. Porteus and I were confronted was the absence of data on the cubic capacity of brain of

the living individual at different periods of growth. We had to supply this information, and so became involved in a long and laborious research amongst some 10,000 living Victorian school children and university students. With the data before us we were profoundly impressed with the extraordinary range of variation of the brain capacity of children of the same chronological age. In every year of life from 6 years onwards there were a large number who possessed 30, 40, and even 50 per cent. more brain capacity than others of the same age.

In the cubing of the living head, by diametral measurement and mathematical calculation, there are various sources of error, most of which are known and can be guarded against. There are others, particularly those induced by varying degrees of neuronic and neuroglial development, which are unknown, and which may be the cause of serious error. These sources of error are fully discussed in our original monograph. But all the sources of error combined, even if they occurred in the same individual case—which is highly improbable—do not, and cannot, account for the whole of the large individual differences as we found them. The range of variation in the cubic capacity of brain of individuals of the same age is much too great to be swept away on the grounds of errors in technique. Some other explanation must be sought, and in my experience it is to be looked for in partial failure of neuronic development.

This problem of the range of variation and its significance, and of the limits of normality, is an extremely important one in all biological processes, and does not appear to be fully realized by the medical profession. Though neither my fellow author nor myself would venture to pose as statistical experts we are both fully satisfied that the statistical method is the only scientific method of attacking such problems. For the purpose, therefore, of establishing a first estimate of the confines of normality of brain capacity, we adopted, for reasons fully set forth in our monograph, the percentile, or more properly the decile method, which may be popularly explained as follows:

Let it be assumed that the stature of 500,000 adult men is the subject of investigation. Every individual's stature is recorded on a separate card. These cards are then arranged in order from the lowest to the highest. A scale, numbered 0, 10, 20, 30 and so on up to 100, is then prepared. The stature of the smallest individual is recorded opposite the zero percentile. The cards are then counted for one-tenth of their number, and the stature there found is placed opposite the 10 of the scale, and so on right through the whole series until the last card is reached, which is that of the tallest man, whose stature is recorded opposite the 100 of the scale. The stature recorded opposite the 50 percentile will give, without any calculation whatsoever—always provided a sufficiency of observations has been taken—the average stature of the community. It is further obvious that the readings at zero and 100 will give the range of the variation within the series examined, whilst the confines of normality may be regarded provisionally as being between the 10 and 90 deciles of the scale, which may be checked, if necessary, by the estimation of the standard deviation about the norm or average. It is clear that the dwarfs will be below the 10 percentile, and the giants above the 90 percentile. Persons whose stature falls below the 10 percentile or above the 90 percentile, may, therefore, be provisionally regarded as being abnormal as regards their stature. It is a matter for regret that school medical officers do not adopt this simple method of displaying the stature and weights of school children, as much labour would be saved, their results would be available for comparative purposes by other investigators, and an indication would be afforded of the range of the variation.

Such a method applied to head measurement and cubic capacity of brain gives the small-headed, and small-brained, at one end of the scale, and the large-headed, though not necessarily the multi-neuroned brain, at the other. On purely theoretical grounds, and as a basis for further investigation, we elected to regard the cases below the 10 percentile, and above the 90 percentile, as the *potentially* abnormal members of the series. We then proceeded to test this hypothesis clinically. Two hundred children, whom we had not previously seen, and in whom there was no suspicion of cerebral abnormality prior to that provisionally revealed by head measurement, were submitted to certain well known standardized mental tests, and what resulted? Of the small-headed, one in every two was found to be at feeble-minded levels, and of the big-headed, one in every four was at a super-intelligent level. In 50 per cent. of the microcephales (deciles 0 to 10), that is, in 5 per cent. of the total series of children, head measurement had revealed evidence of the lack of development of the supragranular layer of the cortex, and of its abundant development in 25 per cent. of the big-headed (deciles 90 to 100)—that is, in 2.5 per cent. of the population. It is a singular fact that these percentages, small though they may appear to be, agree fairly closely with the estimated proportions of cerebral abnormality as determined by other methods.

To have determined the proportion of feeble-minded in the remaining 80 per cent. of the cases—that is, between the 10 and 90 deciles—would have necessitated the psychological examination of nearly 10,000 children, which, for us, was impossible. Mr. Porteus thought he could elicit the same result in another way, and after his appointment to the Vineland Training School he examined a known group of 50 feeble-minded children with the object of determining the exact percentiles of their head measurement. He found that 39 per cent. of the cases fell below the 10 percentile and 14 per cent. above the 90 percentile. In these latter neuroglial development has replaced neuronic development. The remaining 50 per cent. are scattered throughout the remaining 80 percentiles. The agreement between the 200 Melbourne cases and the 50 Vineland cases is so remarkable as to afford a sufficiency of evidence that the majority of mentally defective persons have abnormally developed heads, and that in such cases the determination of the brain capacity affords valuable information as to the state of development of the cortical layers of the brain in a majority of such individuals. In the greater proportion of normal individuals it affords but little information, but in the abnormal its value has been established beyond doubt.

It is not to be assumed that this investigation has been carried out without being checked at every stage by actual clinical practice. It was the clinical problem with which we were concerned from the outset, but we determined that it should everywhere be checked by laboratory investigation of the phenomena of neurology. We have seen many hundreds of feeble-minded children, either private or institutional cases, and in our experience there have been few indeed in whom head measurement, combined with the other avenues of clinical approach, did not afford some indication of the state of development of the cortical layers of the brain. On p. 86 of our Memoir will be found two typical diagnosis charts, regarded by us as the minimum on which diagnosis should be based, these being two of our actual cases. The first one is the case of a middle grade imbecile of the microcephalic type, where the brain capacity (13 percentile) shows a retardation of brain growth of six years, and affords evidence of the lack of development of the supragranular layer, whilst the personal history confirms the fact, inasmuch as it indicates that the individual is working on the animal instincts of his infragranular layer.

The second case is that of a high-grade moron of the macrocephalic (92 percentile) type, which is specially selected because head measurement as such gives no certain indication of the state of development of the cortical layers of the brain. It merely elicits the fact that the child is an abnormally big-headed type. The complete examination, however, makes it an almost certain inference that this big head is not the product of a multi-neuroned brain, but is due to the presence of either fluid or neuroglia. In any case, valuable information has been obtained.

Deeming, the murderer, was an exceptionally small-headed individual, and it is certain that, in him, all the animal depravities were displayed from the presence of an infragranular cortex, with but little or no supragranular cortex; hence the small brain and head, because many of his neurones were absent, or were improperly developed. Deeming was an adult with the brain capacity of a boy of 13 years.

Oscar Wilde is an exceptional case of another category. He belonged to the big-headed type of genius—that is, both his supragranular and infragranular cortical layers were in excess of normal. The production of his literary and dramatic works involved the use of his supragranular

layer, which, exhausted with the effort, underwent a species of chromatolysis, leaving the clamant calls of the now uncontrolled sex instincts of his infragranular layer to work their way into Reading gaol. Students of literature will be enabled to recall many other cases of sex immorality in literary men of genius.

In the many cases of cerebrally under-developed children whom I have seen during the last few years there are few indeed where the examination did not give some indication of the state of development of the cortical layers of the brain, and there were practically none—of the bad cases at least—where the animal instincts of an uncontrolled infragranular layer did not manifest themselves in either the form of uncontrolled sexual activities or some form of theft. Both these are purely animal instincts. If cerebrally under-developed human individuals, through no fault of their own, are to continue to be allowed to exercise their animal instincts at the expense of society, it is time to abandon efforts at social reconstruction. Society demands, and is entitled, to protect itself against the ravages of the cerebrally under-developed, who should be the object of institutional treatment. If that were begun with the children of to-day, of whom there should be a complete national mental and physical record, the next generation would be freed from the incubus of much of the present-day maintenance of the criminal, the prostitute, and the social derelict, because it is now possible, during childhood, to diagnose many of the physical factors which, *given the environment*, make, from the child of to-day, the criminal of to-morrow. The really ironical part of society's indifference to a scientific problem, which it understands only dimly or not at all, is that such individuals, under proper control and guidance, can be made to be self-supporting.

"It is a curious fact," says Groszmann, "that the American nation is spending only 600 million dollars annually for schools, churches, and other constructive agencies; in other words 500 million dollars *less* is spent to develop human assets than is spent to keep up the human failures. It would seem reasonable to expect the American people to apply their recognized business perspicuity to invert these figures, investing more for *constructive conversion* and *conservation*. Such investment in proper methods of conversion of waste would reduce the enormous refuse-heap now accumulating in the form of human derelicts, causing it automatically to shrink to reasonable bounds. All the failures in the business of life, among them the 500,000 or so of criminals 'doing time' in the prisons of this land, were once pupils in our schools, or playfellows in our city streets, in the villages, and the rural districts."

In view of these facts I must take the strongest exception to the concluding remark of an anonymous writer in a medical journal, when he says, "conduct, the person's reaction to the circumstances of real life, must be the deciding factor in the diagnosis of mental abnormality." This is a pernicious doctrine which ignores alike the gravity of the social menace and the findings of neurology. It is a mere locking of the stable door after the stealing of the steed. With a properly established child study clinic, and the taking of a physical and mental census of the school population of to day, the next generation would be rid of many of its derelicts and criminals, and the business of life placed on the basis of efficiency. "The saving is not merely one of money, but, what is vastly more important, human souls."

REFERENCE.

[1]Publications of the Training School at Vineland, New Jersey, No. 20, May, 1920.

A PLEA FOR MORE FREQUENT USE OF CAESAREAN SECTION.

WITH A DESCRIPTION OF A NEW OPERATION.

BY

ARNOLD JONES, M.B.,

SENIOR SURGEON, AYR COUNTY HOSPITAL.

CAESAREAN SECTION is an operation which is having an ever-widening application in the complications of pregnancy and should, and undoubtedly will before long, replace many of the complicated and risky manipulations at present practised.

Craniotomy, a relic of a barbaric past, is after all not so far removed in its sacrificial brutality from a so-called difficult forceps case where there is great risk to mother and child. The ordinary treatment of placenta praevia, entailing as it does risks from sepsis to the mother and grave risks to the child owing to difficulty with the after-coming head, and the frequently difficult and dangerous manipulation necessary to bring down the arms, and cross birth, with its intrauterine manipulations, present examples of conditions in which Caesarean section may well merit the careful consideration of the surgeon.

Eclampsia is rightly regarded as one of the most dangerous complications of pregnancy, and too often in private practice the first one hears of the case is when the patient is in convulsions. Frequently, no doubt, prompt treatment on medical lines leads to a cure, but there is no certainty about the issue and accouchement forcé has rightly been abandoned.

In my experience the best results are got by the early performance of Caesarean section. I have no hesitation in recommending this when convulsions are present, and I am not at all sure that it is not the best practice in a case of increasing albuminuria which resists treatment and before convulsions supervene.

There is no question about the simplicity and safeness of Caesarean section as an operation. One enters and leaves the uterus by an aseptic route, and has the added advantage of inspecting the whole interior so that no placenta or membrane is retained. Under the best conditions the vagina is not an aseptic route, and if the child is delivered after intrauterine manipulation the bruising and abrading of the tracts considerably lower resistance to infection.

The drawback to Caesarean section is the unreliability of the scar for future pregnancy, and unless the patient is sterilized the risk is a real one.

I have devised the following operation with a view to leaving a scar which, I believe, will stand the strain of future pregnancy. It is based on the fact that there are three layers of uterine muscle; the *outer* layer with its muscle fibres running transversely, the *middle*, which contains the vessels, with its fibres running longitudinally, transversely, and obliquely, with no regular arrangement, and the *inner*, arranged as two hollow cones with their bases joining at the middle of the body of the uterus, and their apices surrounding the orifices of the Fallopian tubes. In the non-pregnant uterus these layers are difficult to differentiate surgically. In the pregnant uterus, on the other hand, the outer and middle layers are easily differentiated.

I have taken advantage of this to perform what might be described as a form of gridiron incision. The abdomen is opened in the middle line, and a large strip of gauze wrung out of warm saline is packed between the uterus and the anterior abdominal wall in order to form a dam completely round the incision. The external layer of uterine muscle is now incised transversely, the incision being just below the centre of the body in front and two inches above Bandl's ring. To start the incision I make a small V exactly in the middle line and about one-eighth of an inch into the muscle. This V facilitates accurate apposition in stitching later. A pair of straight, blunt-pointed scissors are inserted into this and passed transversely under the superficial layer of muscle, first to one side and then to the other. The scissors pass easily, and leave a tract between the two layers. The superficial layer is then incised along this tract. It is necessary to carry this incision the full distance across the front of the uterus. The superficial layer is then peeled from the middle layer upwards towards the fundus. This is easily and quickly done with gauze, and the effect is not unlike peeling an orange. The middle layer is now exposed, and the large tortuous vessels it contains are plainly seen. Any bleeding points on this layer should be seized and ligatured, although this is rarely necessary. The middle and inner layers are now incised longitudinally, and the line of incision selected which seems most clear of blood vessels. This is usually, but not always, the middle line. The child and placenta are now delivered, the assistant grasping the uterus firmly to control haemorrhage. The uterus is turned inside out and its interior inspected. The longitudinal incision is now closed by a continuous No. 4 catgut suture, and the transverse incision in the same manner. The uterus is covered with large gauze squares wrung out of normal saline at a temperature of 120°, and kneaded until it contracts. The abdominal wound is closed in the ordinary way.

My experience with this operation is that the bleeding

is distinctly less than with the ordinary incision. The stripping of the outer layer is almost bloodless. I attribute the diminished bleeding to the fact that one is able to select a line of incision most free of vessels, and it may be that the stripping of the outer layer permits of greater retraction of cut vessels. The scar resulting from the operation is an inverted T; the principal scar through the middle and inner layers being covered by a flap of the external layer, the scar of which is the cross member of the T. The two scars not only run at right angles but are not opposite one another.

I have performed this operation successfully on eight occasions; four were cases of eclampsia, two of placenta praevia, and two of contracted pelvis; unfortunately I have not yet had an opportunity of seeing any case in a subsequent pregnancy. I am of opinion, however, that the resulting scar should greatly diminish the risk of rupture.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE DILATATION OF THE STOMACH.

AN example of the above condition occurred recently at the General Hospital, Birmingham. The patient was an obese man of 46; he was over 13 stone in weight, and of the hypochondriac type. He was admitted on May 1st, 1921, with severe upper abdominal pain and vomiting; the diagnosis of gall-stone colic was made. After three days the symptoms subsided, but another attack occurred on June 11th. It was decided that operation was necessary, and this was performed on June 20th. A small umbilical hernia was dealt with, and the abdomen opened. The appendix and gall bladder were removed, the latter containing ten rather large gall stones.

Vomiting occurred an hour after operation, and continued at intervals of an hour or so throughout the two days following, but on the third day much more serious and projectile vomiting ensued. By the fifth day vomiting was less frequent but sometimes more copious. Thus 30 to 35 oz. of yellow fluid neutral to litmus were brought up at one bout. During the fifth to eighth days following operation over 100 oz. of vomited fluid was measured daily. A remittent temperature of 99° to 101° F. persisted, with a pulse rate of 110 to 140, throughout this period of eight days. The patient became progressively weaker, and died on the eighth day. Lavage of the stomach and rectal feeding were tried without success. A striking fact towards the end was that the patient vomited twice to three times the total amount of fluids given daily.

At the *post-mortem* examination the operation area appeared to be sound, there being no peritonitis. The stomach was found to be enormously dilated. Over 71 oz. of yellow fluid was present within it. The pylorus was not obstructed, but the duodenum and upper two-thirds of the small intestine were extremely dilated. The coils of small intestine were lightly matted together by a delicate fibrinous reticulum of exudate. The liver was normal apart from some fatty infiltration. The heart showed marked fatty degeneration. The other organs presented no important abnormality, but early bronchopneumonia was evident on examination of the lungs.

The patient was admitted under the care of Mr. Seymour Barling, F.R.C.S., to whom I am indebted for permission to report the case.

Birmingham. CHARLES J. LEWIS, M.B., M.R.C.S.

RAT-BITE FEVER.

DR. BURTON-FANNING'S interesting paper upon five cases of rat-bite fever (June 18th, p. 886) induces me to record briefly a case that occurred in my own practice eighteen months ago. Towards the end of November, 1919, a woman, aged 32, was bitten by a rat on one finger; when she came to me, three days afterwards, she had a very septic finger, inflammation over the back of the hand and red streaks up her arm. Three weeks afterwards she had her first attack of shivering and sweating, and pain in the back and legs, with some difficulty of moving her legs and standing; this seizure, which was the longest she had, lasted for five days; after an interval of three or four days she had another attack of shivering and sweating. On nearly every occasion these symptoms were accompanied by erythematous blotches which might appear on any part of the body and disappeared with the fever. The attacks lessened in severity and the interval became longer; it is estimated that she had at least twenty attacks. I frequently saw her at the height of the fever, when her temperature would be 103° or 104° F. The patient lived far in the country and no nurse was available, so that a temperature chart was an impossibility. Quinine and salicylates appeared to have no effect on the symptoms; tabloids of iron and arsenic were commenced rather late and were given freely; they certainly had a good effect, and I think shortened her illness. Her convalescence was rather protracted; it was not until the summer that she fully recovered her usual health.

Milverton, Somerset. CHARLES RANDOLPH.

Reports of Societies.

PHYSICAL EDUCATION IN AMERICAN UNIVERSITIES.

A MEETING of the Medico-Chirurgical Society of Edinburgh was held on July 6th, Emeritus Professor F. M. CAIRD presiding. Dr. R. TAIT MCKENZIE, Professor of Physical Education in the University of Pennsylvania, described the system of physical training carried out there and in many other American colleges and universities. His own chair was founded in 1904, and some form of physical culture now formed a regular part of the curriculum in Pennsylvania University, a certain proficiency being required of every student in qualifying for his degree. This university had about 11,000 students, and the freshmen, about 4,000 each year, underwent a complete physical examination on entrance: in the first place defects in posture were dealt with by specially prescribed exercises, while more serious defects in the heart and lungs were met by suitable exercises or appropriate treatment. The details of this physical analysis, with other items, were entered upon a card for each student. A few lectures on physical fitness, diet, hygiene, and venereal disease were then given. Broadly, three forms of physical culture were provided for the young students: a variety of outdoor sports and games, about twenty in all; a course of gymnasium exercises; and specially prescribed exercises. But all were supervised, attendance was recorded, and a certain grade of proficiency required. About one-half of the new students took the gymnasium course; one-third engaged in outdoor sports; while the remainder, including the more enthusiastic students, carried out the specially prescribed exercises. He did not encourage the gymnasium course for more than a year, or at most two years; and, indeed, after one year many of the men discovered an aptitude for some athletic game and took that up, some of their finest athletes being discovered in this way in the gymnasium. They realized that the majority of men could not be made into great athletes, but their experience taught them that nearly all young men could be educated in one or other game, and also in alertness, versatility, and physical intelligence. The gymnasium training included instruction in the movements that were the basis of such sports as boxing, wrestling, and fencing. In the United States great public interest was taken in their athletic competitions, especially in football and baseball, which were witnessed by enormous crowds. A large revenue came in from these matches, but this all went into the common exchequer; in fact, football really paid the way of the gymnasium, rowing, and other unremunerative sports. In this way money abuses were guarded against; and care was also taken to repress professionalism by demanding even from their best athletes a certain grade in college proficiency, and also a residence rule of one year.

Sir LESLIE MACKENZIE said that a right policy of physical education was very wide, and meant intelligent superintendence of the individual almost from conception to the end of adolescence. The Royal Commission in 1903 had supplied ominous facts as to the poor physique of our people, and the institution of medical inspection in schools

had confirmed them. More and more attention was now being paid to physical culture in the schools, and they had in mind not the physical training of the drill sergeant, but a true physical education. The real end of physical training was not material but spiritual, and lay in the development of character. But this policy should not stop in the schools but should be continued in the universities.

Dr. L. D. CRUIKSHANK described the system of physical training carried out in Scottish board schools. It was based on the Swedish system, but it was only in the intermediate and higher grade schools that gymnastic apparatus was used. They had tried to avoid dull monotonous exercises, and made use of games, dancing, and general activity that quickened interest and made for alertness and brightness. They were also beginning instruction in personal hygiene in the schools. In their training colleges special attention was given to physical training, and regular instruction in theory and practice and in class teaching was given by medical officers. Further, the Dunfermline College of Hygiene and Physical Training turned out each year some twenty expert instructors who were sent to the higher schools but who had supervision of the teaching in the ordinary schools.

Sir MONTAGU COTTERILL spoke of the contrast between the position occupied by athletics at the Scottish public schools and at the universities. In Edinburgh University only a small percentage of students took part in athletics, and though the university authorities now gave some recognition and financial support to athletics, much more remained to be done. He would be glad to see athletics and physical training organized in the way explained to them. Mr. C. W. CATHCART said he had listened with admiration to the way in which physical training was being dealt with in Scottish schools, and he considered that the extension of this system to the universities would confer a great national benefit.

Dr. A. B. FLETT, speaking from his own experience, said the great difficulty in university athletics was the one of finance, and he asked for information as to the cost per man per annum of such a system as that in Pennsylvania University. Dr. G. MACKAY, P.R.C.S.Edin., said he was so convinced of the importance of this subject that he had already advocated in public the need for a chair of physical culture in Edinburgh University. Professor MEAKINS, Dr. SYM, Dr. CHALMERS WATSON, and the PRESIDENT also spoke, and Professor TAIT MCKENZIE replied.

Reviews.

MEDICAL CONDUCT AND PRACTICE.

IN his lectures to students of forensic medicine Dr. AITCHISON ROBERTSON is in the habit of including the subject of medical ethics; he has embodied his teaching in a small volume, *Medical Conduct and Practice*.[1] His object is to help the young doctor beginning his professional career, and it may be admitted that there is room for a new book on medical ethics. Dr. Robertson defines medical ethics as a body of rules and principles concerning moral obligation intended to regulate medical practice. It is, he says, a subdivision of that branch of ethics which is known as utilitarianism, which makes the "greatest happiness of the greatest number" the supreme end or criterion of conduct, and, though the exponents of utilitarianism by no means agree with one another in their philosophy, probably the definition will serve. Many of Dr. Robertson's propositions in his first chapter, "Ethics as a Branch of Philosophy," might be disputed; and his utterances on the value of truthfulness in the doctor do not seem always to be consistent. Still, the chapter is written in a lofty strain, and contains many wise remarks on the moulding of character. In Chapter III, on "Commencing Practice," the wisdom becomes more worldly and of a strictly practical nature: "If you intend to practise in a special locality, it is advisable to gain your experience in another locality more or less remote. It is inevitable that the beginner will make mistakes of some sort or another." Attention is called to an effect of the introduction of the National Insurance Act: whereas formerly it was possible to build up a practice by one's own efforts, the doctor "climbing over the backs of the poor into the pockets of the rich," it is now, the author thinks, extremely hazardous to commence on one's own account without the purchase of a panel practice. The necessity for a house of superior and dignified appearance, well managed and with good domestic arrangements, is emphasized. Attention is called to the frequency with which partnerships are unsatisfactory, owing to the predominance of the personal factor in medical practice. In the chapter on "Increasing One's Practice" there is a certain naïveté which was, perhaps, unavoidable in dealing with such a subject if pure cynicism was to be avoided. But the general effect is good, and the advice should be of benefit to the young practitioner. Our author is very serious, and we gather from his remarks on leisure time that he does not approve of open-air pastimes for doctors. The amount of outdoor exercise involved in their daily work should lead them, he thinks, to devote their leisure to reading or to hobbies connected with science, art, history, or mechanics. Can it be that a Scotsman exists who despises golf? However, many truths are better enforced by over-emphasis, and this, perhaps, accounts also for Dr. Robertson's statement that "scarcely a month passes without there being something new discovered in medicine, pathology, or therapeutics." It is well to keep abreast of medical advances, but imagination reels at the thought of twelve epoch-making discoveries in a single year.

The advice on "Taking on your list new patients" is extremely sound, and the proper attitude with regard to patients who wish to change their doctor is dealt with very fully. Dr. Robertson's views on consultants are interesting; he says: "The term consultant means one who consults with another medical man; hence if he does not do so, he becomes an ordinary medical adviser, and loses that prestige which ought to go with the vocation." This weighty pronouncement is placed in close proximity with meticulous directions as to persons with whom the consultant should shake hands! The subject of fees is well dealt with, though it is by no means clear why it should still be regarded as proper "to attend the clergyman (and his family) of the church you attend without presenting any account," especially in view of a later remark that it "gives a feeling of independence to your patient to have paid your bill." Dr. Robertson regards surgical fees as out of all proportion to the services rendered or the amount of skill displayed, and adds that "it is the younger surgeons who err in making exorbitant demands."

In the later portions of his book, dealing with certificates, notification, lunacy, medical secrecy, and numerous other matters, Dr. Robertson's powers of condensation lead to occasional obscurity, owing perhaps to differences in the laws of Scotland and England. We are inclined to think that some of his statements need revision, such as the assertion in a book published in 1921 that for each notification of infectious disease a fee of 2s. 6d. is paid if it occurs in private practice! This is not a very important error, but certain points of a more serious legal or medical nature seem to need reconsideration. Even the statement that "unless a policeman comes himself, or definitely sends someone for you to attend an accident, it is unlikely that you will receive any payment for giving first aid," would be made much more watertight by omitting the alternative.

In our opinion this book, which is of moderate size, should be read by every newly qualified medical man or woman.

SKIN DISEASES.

SINCE the first edition was published in 1907, Dr. WHITFIELD'S handbook on *Skin Diseases and their Treatment*[2] has grown, but in an unusual fashion. The pages are bigger, but there are not many more of them; consequently it remains a convenient volume to handle. It is essentially a book for general practitioners, who will find it very useful owing to the fullness with which it deals with the problems of treatment. Moreover, specialists in the subjects will be able to pick up many valuable hints, for Dr. Whitfield is an experienced and ingenious physician, gifted with an original mind not unduly trammelled

[1] *Medical Conduct and Practice: A Guide to the Ethics of Medicine.* By W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E., F.R.S.E. Edinburgh: A. and C. Black, Ltd. 1921. (Cr. 8vo, pp. 174. 6s. net.)

[2] *A Handbook of Skin Diseases and their Treatment.* By Arthur Whitfield, M.D., F.R.C.P. Second revised edition. London: Edward Arnold. 1921. (Demy 8vo, pp. 301; 56 plates. 18s. net.)

by the shackles of conventional practice. These characteristics are especially brought out in the chapter on syphilis. He advocates large doses of salvarsan at long intervals, in fact, only three doses of 0.9 gram to every adult patient in good health, with intervals of three weeks between the doses, during which time the patient takes 1 grain of grey powder three times a day. The mercurial treatment is kept up for a year. He claims excellent results from this method, both clinically and as tested by the Wassermann reaction. But no statistics are given. Moreover, contrary to the general view at the moment, he prefers the oral administration of mercury to intramuscular injection. The reasons adduced for these modifications of the more usual practice are weighty, if perhaps not absolutely convincing. As an introduction to dermatology for students this handbook is sound but has the disadvantage that in the double endeavour to keep down its size and to give prominence to treatment the important department of diagnosis has not been dealt with quite so fully as it deserves. A celebrated physician is said to have remarked that the first essential of medicine was diagnosis, and the second was diagnosis, and the third was diagnosis. This is quite as true of dermatology as of any other branch of medicine, and the present author, we are sure, would be the first to admit that correct diagnosis is the only foundation for successful treatment. As an exposition of and apologia for the theory and practice of a leading British dermatologist the volume is very interesting and should be read and pondered. The illustrations are clear and good, but the microphotographs of sections are, as always, difficult to interpret.

GASTRO-INTESTINAL DISEASES OF INFANTS.

PROFESSOR MARFAN of Paris is so well known on account of his work on children's diseases that his *Introduction à l'étude des voies digestives dans la première enfance*,[3] which is the second edition of his lectures delivered during the war, and published in 1918 under another title, requires no recommendation to those interested in this important subject. With the commencement of the nineteenth century infantile digestive disorders attracted very little attention, and in the numerous works that have since appeared their nomenclature and classification have varied according to the dominant views as to the determining factors, such as the morbid changes found after death in the stomach and intestines, the clinical causes, infection, intoxication due to poisons in the intestinal contents, and functional disorders of the various parts of the alimentary tract, including the liver and pancreas.

The first part of the volume contains five chapters dealing seriatim with these several doctrines, and shows that a classification constructed on these lines fails in practice, for the digestive disorders are often due to combinations of these separate factors, the etiology and pathogeny being often extremely complex. An etiological classification is impracticable because the same clinical manifestation may be due to several different causes, and, moreover, a single factor may, on account of other conditions, determine different clinical pictures. Similarly attempts to base a classification on structural changes in the alimentary canal, and on the chemical, microscopical, microbic, and toxicological characters of the gastro-intestinal contents, have failed. Professor Marfan has constructed for clinical use a classification based on the predominant symptoms; this he has tested in practice and modified as the result of his experience. The predominant features which form the main headings of this clinical classification are vomiting, diarrhoea, constipation, and malnutrition; there are then several subdivisions under each of these four main divisions, those under the heading of diarrhoea being the most numerous. The elasticity of this classification will allow the insertion of any new form of disease without any disturbance in its main lines.

A VETERAN'S AUTOBIOGRAPHY.

IN *The Story of My Life*[4]—written when in his 78th year—Mr. W. D. SPANTON, F.R.C.S., now in retirement at Hastings, gives a retrospect of his busy and successful career as a surgeon in the Midlands. The most interesting part of the volume is that which contains reminiscences of his apprenticeship to a provincial surgeon in the late fifties, and of the time when he was a medical student in London and a house-surgeon and an assistant in the sixties. The greater part of his life was spent at Stoke-on-Trent; he first went there as house-surgeon to the North Staffordshire Infirmary, and was on the honorary surgical staff of that institution for thirty-four years. Recognized as one of the leading provincial surgeons, he was the last president of the old British Gynaecological Society (now amalgamated in the Royal Society of Medicine), and he tells of the many international medical congresses which he attended abroad. A very old member and office-bearer of the British Medical Association, he is afraid, looking back on the roseate years, that it has fallen now on evil days. "The atmosphere"—of the Annual Meetings—"is different, and there is an absence of that warm, friendly, personal intercourse which was formerly one of its great attractions . . ." We may hope that after writing these words Mr. Spanton went to Cambridge last summer, to find that he was mistaken, and is going to Newcastle this month. He has been very fond of travel, and in the volume describes the many voyages he has made, looking very rightly on the sea as the best relaxation from the cares of surgical practice. The autobiography has been edited by Mr. ERIC E. YOUNG, who has, however, been rather sparing of the blue pencil; the physiological inaccuracies on page 13, and the phrase, "the injection of toxins," on page 309, are instances. But Mr. Spanton's "humdrum domestic history," as he calls it, was well worth recording, and it will be read with interest by many others of his craft.

NOTES ON BOOKS.

The Empire at a Glance[5] is a pamphlet by Mr. J. B. THORNHILL which contains many original and patriotic ideas and some interesting maps. He is an enthusiast particularly on the possibilities of future development in the islands of the British Empire—Newfoundland, Vancouver, New Zealand, and Tasmania—which he considers could support in comfort many millions more than the present populations. He remarks that "Australia has a strong imperial but no national sentiment," but surely in this instance he is mistaken. Was he ever in contact with an Australian division in the war, or has he ever talked about cricket to an Australian? His notes, however, on climate in regard to white men are sound and to the point.

Between forty and fifty sets of verse are contained in *Memories in Melody*[6] by Dr. ARTHUR CHARLES NASH, a Guy's student now resident in British Columbia. The majority are word pictures of places visited; in one or two there is a reference to the late war, but in none is there anything which betrays the author's professional occupation. Much the most ambitious in point of length is the poem which best justifies the word Memories in the title—a 500 line record apparently of the author's early life. The volume is to be welcomed, since the atmosphere throughout the book is restful, the rhyming true, the wording simple, and the cadence as a rule very tuneful.

The Control of Sex Infections,[7] by Dr. J. BAYARD CLARK, is a short manual intended "to bring forward the subject [of venereal disease] into the daylight of open and purposeful discussion." It is meant to appeal to the American rather than to the British public, with whom, the author thinks, the subject is already "a burning topic." Such books as this are useful in so far as they put forward new ideas for dealing with this problem. Dr. Clark's chief contribution is a suggestion of universal training, military for youths and physical and domestic for girls, to be carried out in camps for periods of from six to nine months. In addition, he considers that every child, on reaching the age of puberty, should receive "some instruction on the sexual infections and other pathology"; and in the field of sexual teaching he hails the moving picture as a great help. The publishers of the volume state on the

[3] *Introduction à l'étude des voies digestives dans le première enfance.* Par A. B. Marfan, professeur à la Faculté de Médecine de Paris. 2e édition, revue et corrigées. Paris: J. B. Baillière et Fils. 1920. (Fcap. 8vo, pp. 152. 6 francs.)

[4] *The Story of My Life.* By W. D. Spanton, F.R.C.S. Edited by Eric E. Young, M.S.Lond. London: Published by the *Connoisseur*. 1920. (Post 8vo. pp. 409. 25s.)

[5] *The Empire at a Glance.* By John Bensley Thornhill. London: J. B. Thornhill, 14, Jermyn Street, S.W. 1921. (Pp 11; 6 maps. 1s. net.)

[6] *Memories in Melody.* By Arthur Charles Nash. Toronto: The Ryerson Press. 1920. (Crown 8vo, pp. 85. 5s.)

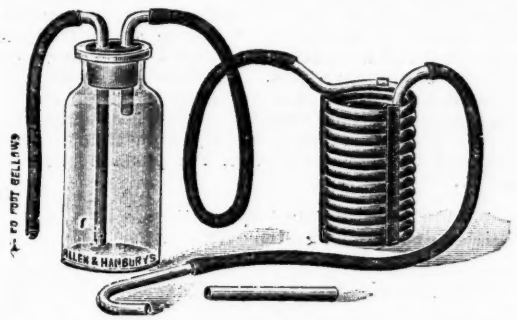
[7] *The Control of Sex Infections.* By J. Bayard Clark, M.D. New York: The Macmillan Co. 1921. (Fcap. 8vo, pp. 139. 7s. 6d. net.)

cover that it is "of paramount importance to social workers . . . and to all intelligent parents." Nevertheless, parents may be excused if they doubt whether their young daughters should receive sexual education with the aid of the cinema, or instruction on sexual infections and pathology on reaching the age of puberty; and they may object to their daughters being segregated into camps and cantonments on "reaching the age of 16 or 17" to receive instruction in domestic economy and physical jerks.

APPLIANCES AND PREPARATIONS.

Apparatus for Maintaining Anaesthesia by Open Ether during Throat Operations.

DR. HAROLD SINGTON (Senior Anaesthetist, Hospital for Sick Children, Great Ormond Street) writes: The apparatus here illustrated consists of three main parts—(1) Foot bellows and rubber tubing which sends air through ether contained in (2) Wolff's bottle, and thence by a connexion of rubber tubing through (3) the coil of malleable metal (twelve circles, each nine inches in circumference) which is placed in a vessel containing hot water, whereby the ether vapour becomes heated. This warmed ether vapour continues through the rubber tubing to a flexible metal tube, six inches long, which is placed in the



mouth and is easily adjusted to the required position by its flexibility. The rubber and metal tubing, all having the same sized bore of one quarter of an inch, enables an ample amount of the warm ether vapour to enter the mouth and so maintain a perfect anaesthesia which has been previously induced by the open ether method. The use of the foot bellows leaves both the anaesthetist's hands free; or oxygen passed through the ether instead of air from the bellows serves the same purpose. This apparatus has been used by me for the operation of enucleation of tonsils by dissection in a vast number of cases during the last two and a half years. It was made for me by Messrs. Allen and Hanburys, Limited, of Wigmore Street, London, W.

An All-Glass Inhaler.

DR. R. C. MACDONALD (Inverness) writes: The all-glass inhaler, shown in the illustration, gives a highly saturated vapour with volatile drugs. It has been found beneficial as a means of employing a suitable inhalant mixture in phthisis, laryngeal tuberculosis, nasal catarrh, and as a preventive of influenza; also in rhinitis and suppuration of accessory sinuses—antrum or frontal—in various forms of nasopharyngeal catarrh, asthma and bronchial trouble. The inhaler can be sterilized by boiling, and by a quarter turn of the stopper it can be safely sealed and packed for travelling with inhalant in it, ready for instant use. It can be obtained for nasal or oral inhalation, or the nasal appliance can be used for either.

The appliance is supplied by Messrs. Allen and Hanburys, Limited, 48, Wigmore Street, London, W. 1.

A COLLECTION of lantern slides demonstrating the surgical anatomy of the temporal bone has been prepared from specimens in the collection of Mr. Arthur Cheatle, now in the Museum of the Royal College of Surgeons, Edinburgh. This collection, in five boxes, together with an album of 200 photographs and a descriptive catalogue and guide of the specimens, has been issued, under Mr. Cheatle's direction, through Messrs. H. K. Lewis and Son, 136, Gower Street, W.C. The price of the complete outfit is £30, but the album, catalogue, and guide can be obtained for £14, or the slides and catalogue (without the album) for £18.

MEDICAL excursions to French watering places, which were well attended before the war, will be resumed this year. From September 4th to 15th an excursion will be made to Vichy, Royat, La Bourboule, Mont Dore, St. Nectaire, Chatel-Guyon, and St. Honoré. The cost of the excursion will be 500 francs. Further information can be obtained from Dr. Gerst, 17, Rue de Suresnes, Paris.

PENSIONS ADMINISTRATION.

DEPARTMENTAL COMMITTEE'S REPORT.

THE Departmental Committee of Inquiry into the Administration of the Pensions Ministry presented its Report* on July 5th, and upon it the Second Reading of a War Pensions Bill was taken in the House of Commons on July 8th, though the volume of 156 pages had not then been generally circulated.

The Committee, of which Major Tryon, Parliamentary Secretary to the Ministry, was Chairman, comprised seven members of Parliament, ex-officers and representatives of local War Pensions Committees, Service Men's Associations, and of the Department. No fewer than 121 witnesses were examined, and 115 sittings, including those of sub-committees, were held. It was brought out that nearly three and a half millions of men, women, and children are now receiving war pensions allowances, as compared with about half a million at the beginning of 1917. The estimated expenditure of the Ministry for the current financial year was stated to be £111,556,665. The cost of administration is about 6 per cent., which is not considered excessive for detailed work of this kind, but various recommendations are made for greater efficiency and substantial economy. These are summarized under sectional headings.

Headquarters Control and General Matters.

After suggesting improvements in the statistical return the Committee reviews the business side of medical treatment (hospital supplies—medical and other, including contracts for food, artificial limbs and similar matters, and accommodation), and advise that a small hospital committee, composed of officers of the administrative, finance, and medical divisions, which at present deal with all proposals for capital expenditure in connexion with Ministry institutions, should be strengthened and made responsible for this work. As regards the internal administration of hospitals and other medical institutions of the Ministry, the Committee is of opinion that the medical superintendent and the medical staff of these hospitals should, in the interests of their medical work, be relieved as far as possible of the business details of management; and that, in the larger hospitals at any rate, a responsible lay officer should be associated with the medical superintendent in regard to the requisition of supplies, the staffing and equipment, and other similar non-technical matters. Already in some of the larger military hospitals there is a lay secretary whose duties are only of a minor clerical kind. It is recommended that the position should be raised.

The Committee makes further general recommendations for relieving the medical staff of the Ministry of routine and clerical work in the regional offices and sub-offices, and advises that the principle should also be applied to administration at headquarters. At present the staff, both of the medical services division at headquarters and of the commissioner of medical services at regional offices, is composed very largely of medical men.

Local Committees and Regional Systems.

The estimated expenditure for which local committees were responsible in 1920–21 was £20,575,000, and the Departmental Committee finds that, in the course of events, the local committees have been called upon to assume a far greater responsibility for public funds than was contemplated. The evidence went to show that, in the case of most committees, allowances and grants were paid by the officials without previous sanction from the committees, who relied for their knowledge of the cases upon tabulated statements submitted on prescribed forms. These were ordinarily accepted without any investigation of the merits of individual cases, and were signed by the chairman upon (or sometimes even without) a formal resolution. Only a limited number of committees had adopted a system of checking cases. Whilst a large majority of the secretaries and finance officers carried out their duties conscientiously, doors were opened to fraud, and 106 cases of malversation of funds had been discovered in a recent period of six months.

It is recommended that the committees should cease to be responsible for routine work in administration, and that this should instead be carried out under the direct control of the Ministry acting through the regional offices. For this purpose the staff required for local offices should be in the direct employment of the Ministry under the

*Report of the Departmental Committee of Inquiry into the Machinery of Administration of Pensions. 1921. To be purchased through any bookseller or direct from H.M. Stationery Office. Price 2s. 6d. net.

control of an officer to be termed the "Chief Area Officer." It is further recommended that the staffs at present employed in the local committees' offices should, together with the staffs employed in the offices of the Area Deputy Commissioner of Medical Services, be reviewed in order to determine the persons who should be transferred to the service of the Ministry. It is suggested that the chief area officer should act as secretary to the local committee.

There are at present 382 Local War Pensions Committees and about 900 Local Subcommittees. It is advised that the system of subcommittees be abolished; that the number of committees and local areas be limited to a maximum of 450; that the number for each region be prescribed by the Minister; that the total membership for committees should in no case exceed 25; and that all members should be appointed and removable by the Minister. It is suggested that the local committee should be constituted of representatives of local authorities, ex-service men, widows or dependants, voluntary organizations and labour, with other members, not exceeding four, to be appointed by the Minister.

As regards regional organization the Committee recommends that the local office should, as far as possible, be the combined office of the Deputy Commissioner of Medical Services and the local committee, and that the clerical staff of the local office, including that of the D.C.M.S., should be under the immediate direction of a chief area officer.

Medical Services.

The estimated cost of medical services for the year ended March 31st, 1921, was £9,187,271, made up as follows:

	£
Medical boards (fees, salaries, and travelling expenses)	1,587,250
Medical referees (fees and mileage)	294,735
Salaries of full-time medical officers of the Ministry and their clerical staffs	585,974
Treatment (Ministry hospitals and clinics) ...	2,930,650
Treatment (payments to civil hospitals, general practitioner treatment, special diet, dental treatment and dentures, payments to approved societies)	2,619,653
Artificial limbs and surgical appliances ...	758,121
Travelling expenses of patients	350,888
	£9,187,271

While recognizing the great progress made in the decentralization of duties to the regions, the Committee recommends that the work connected with the supply, repair, and renewal of artificial limbs should be transferred as soon as practicable.

After appreciative reference to the responsible character of the work of the regional authorities, the report touches upon the liaison services of the deputy commissioners of medical services. It is pointed out that area deputy commissioners of medical services are associated with local committees, medical referees, tuberculosis officers, Ministry of Pensions hospitals and clinics, and civil hospitals. This association is acknowledged to be the key to the efficient administration of medical services, and the Committee recommends that it should be developed and strengthened at every opportunity. There should be, moreover, a constant process of devolution of the medical work from regions to areas, and, just as the duty of the Medical Services Division at headquarters should consist of instructing, supervising, and co-ordinating the regions, so the regions should depute their executive functions more and more to the areas, retaining only such important and special executive functions as could not well be further decentralized.

The Committee regards the organization of medical services as generally satisfactory, but holds, as already noted, that medical officers should be relieved as far as possible from correspondence and similar clerical work.

Medical Boards.

During the twelve weeks ended March 19th, 1921, the number of cases examined by medical boards was 291,933. The present weekly rate of examination was approximately 15,000. The Committee considers that the composition of the boards was generally satisfactory as regards medical knowledge and experience. It understands, however, that the number of heart specialists required exceeds those available, and that a number of specially selected medical men are accordingly being trained by consultant cardiologists with a view to their subsequent employment as heart specialists on medical boards. The Committee is satisfied that pensioners have little or no cause for complaint with regard to the actual examination. It has been represented that the number of cases of appeal against the assessment made by medical re-survey boards pointed to these assessments being generally too low. This allegation was not supported by the results of the examinations made by appeal boards:

During the twelve months ended December 25th, 1920, approximately 1,250,000 cases were examined by medical re-survey boards; and during the same period there were 61,199 cases of appeal on the ground of under-assessment by re-survey boards. Of these cases the appeal boards confirmed 54.8 per cent.; lowered 11.6 per cent.; and raised 33.6 per cent.

Complaint has been made of delay in bringing claimants before medical boards under Article 9 of the Warrant, but the Committee holds that this rarely happens in ordinary or normal cases. Complaints have also been made of delay in re-boarding appeal cases, but the regional medical branches are now able to dispose of nearly every case within three weeks of the receipt of the documents. There were 1,140 cases under call for examination on April 23rd, 1921, leaving less than two weeks' work outstanding.

It appears to the Committee no longer essential that in re-survey cases the pensioner's examination should be conducted in all instances by three medical men. It is therefore recommended that in some areas where two or more medical boards are held on the same premises the experiment should be tried of reducing the personnel of medical re-survey boards to two, with a third medical officer present and available for consultation where doubt or difference of opinion arises. The third doctor should be present at the examination of any case in which the proposed assessment would result in no further awards, or in an award of gratuity or final weekly allowance, or where it is proposed to recommend that the pension should be permanent.

Alleged Secret Instructions.

On this subject the Committee states:

"Throughout the course of our inquiry we have repeatedly encountered the suspicion, amounting in some instances to positive belief, that the Ministry has, at some time, issued instructions to medical boards to make lower assessments. We are unable to say what has given rise to this suspicion, unless it can be explained by the fact that there is a tendency for assessments to go down; this is the expected result of medical and surgical treatment and attention and of restoration to civil life. We have inquired most searchingly into this matter, and wish it to be recorded that no instructions, secret or otherwise, have been given or issued by the Ministry, the effect of which would be to induce medical boards to depart from the practice which has always been followed, of accepting as their standard of comparison a normally healthy man of the same age as the pensioner and assessing the degree of the pensioner's disablement in accordance with the extent to which, in their opinion, his disability reduces him below that standard."

So far from there being a sudden reduction due to secret orders, a table shows that the rate of decrease in average assessment is slowly and steadily becoming less, the percentage having fallen from 6.6 in August, 1920, to 4.1 in March, 1921. In every case without exception the percentage assessment of disablement on which the amount of pension is based is determined by a medical board, by whom the man is examined and whose finding as to the degree of disablement cannot be overruled by any official of the Ministry.

Hospital Treatment.

The Committee is satisfied with the Pensions Ministry's practice of using as far as possible civil hospitals for in-patient treatment and meeting the deficiency by establishing hospitals under their own control. There is no delay in admissions, except in neurological cases, and, when the training of medical men at neurological hospitals is completed, the Ministry will be able to increase the bed accommodation for such cases. It appears that the staff in some of the Ministry's hospitals is in excess of requirements, and it is recommended that the Visiting Committee should determine a standard for each institution which shall not be exceeded without authority from headquarters.

The Committee advises that a clearing house shall be established in each region to deal with recommendations of in-patient treatment.

Statistics relating to the number of cases undergoing or awaiting the provision of out-patient treatment were supplied.

On March 31st 2,122 officers, 69 nurses, and 105,735 of other ranks were undergoing treatment; and 210 officers, 10 nurses, and 5,555 of other ranks were recommended for out-patient treatment and were awaiting completion of arrangements.

An analysis, on March 31st, of the four classes of cases being dealt with gave the following figures:—General medical and

surgical: Receiving treatment, 64,236; awaiting treatment, 1,066. Tropical diseases: Receiving treatment, 20,217; awaiting treatment, 1,866. Neurasthenia: Receiving treatment, 7,515; awaiting treatment, 2,768. Tuberculosis: Receiving treatment, 12,077; awaiting treatment, 15.

While it does not consider that the Ministry could dispense with the valuable services rendered by civil hospitals in out-patient treatment, the Committee recommends that Ministry clinics should be made competent to provide, where necessary, for any form of disability by the appointment of selected local medical men as additional medical personnel in part-time attendance. A reason mentioned for this course is that it is exceptional for the out-patient department of civil hospitals to be open in the evening. The Committee strongly favours the Ministry's proposal to increase the number of clinics from 140 to 250.

Insurance Practitioners and Home Treatment.

In some cases a pensioner is certified to require general practitioner treatment for his service disability, and this is left to his insurance practitioner. In certain other cases Ministry of Pensions treatment is given to a man eligible for insurance practitioner treatment. The Committee recommends that the Ministry of Pensions should, in the interest of pensioners, endeavour to arrange with the Ministry of Health a system of exchange of medical information with regard to such cases.

Special Cases.

The Committee recommends that the Ministry of Pensions should endeavour to arrange with the Board of Control for wings of certain existing asylums to be reserved for certified ex-service mental patients, the food, etc., to be provided as if the wing were a Ministry hospital. Approximately 6,000 service patients are at present maintained by the Ministry in mental institutions.

The Committee recommends that the Minister of Pensions should give his attention to the possible danger that the interests of tuberculous ex-service men may suffer by reason of the divided responsibility for their care.

The provision of dental treatment is touched upon, and the Committee recommends that the Ministry should exercise more supervision in respect of the extent of the service, which, they suggest, has in some cases gone beyond the State's liability.

The number of men who lost limbs during the war was about 39,000, of whom 2,000 were officers. On April 12th of the present year 21,489 men had been provided with duplicate limbs. The Committee recommends that further limb-fitting centres should be opened where they are found to be required; beyond this no recommendation is made, as it is thought that this subject can be best dealt with by a special committee, composed of surgical and mechanical authorities, which has just been appointed by the Minister to hear evidence as to dissatisfaction.

Officers' Branch.

On March 31st, 1921, there were 37,118 officers, 9,741 officers' widows, 9,190 children, 6,541 dependants, 1,455 nurses, and 25 nurses' dependants in receipt of awards, the total estimated expenditure for the year being £6,291,000. The Committee recommends the continuance of a centralized system of officers' awards. The general conclusion is that delays are infrequent, and steps have been taken to remove the causes. The Committee, however, is not wholly satisfied with the standard of accuracy of awards made or proposed, and is of opinion that, whilst the total numbers of staff of the Officers' Branch could be reduced, steps should be taken to strengthen the higher staff of the Branch. Subject to the criticisms and proposals contained in other parts of the report dealing with the Officers' Branch, the Committee finds that the administration in detail is efficient, but in its broader aspects they feel some further consideration is necessary. There is insufficient co-ordination among the various branches administering benefits to officers, and they cannot regard this position as satisfactory. They therefore recommend further examination of the subject.

Miscellaneous.

Among the other recommendations the following may be noted: (*a*) That the whole question of permanent pensions should receive the early attention of the Minister. (*b*) That the Minister should consider the formation of a Central Advisory Committee, consisting of officers of the Ministry (local and central) and representatives of local committees, and ex-service men, to consider such matters as might be put before them by the Minister for their advice. (*c*) That regional awarding officers and medical officers should be instructed to explain briefly, in answer to queries by pensioners and claimants, the grounds of the decision. (*d*) That a Complaints Branch be set up in each regional office under the direct control of the regional director. (*e*) Under the Ministry of Health Act, 1919, powers and duties of the Minister of Pensions with respect to the health of disabled officers and men may be transferred to the Minister of Health within three years, and in not less than one year from the termination of the war, by Order in Council. Similar provisions exist in the Scottish Board of Health Act, 1919. The Committee draws attention to the disastrous effects of dual control, and recommends that the provisions referred to should be reconsidered with a view to their repeal.

VOLUNTARY HOSPITALS COMMISSION.

LORD CAVE'S committee recommended that there should be set up a Voluntary Hospitals Commission which should have as its first and principal duty the administration of the temporary grants the committee recommended Parliament to make, but should also be available for other functions mentioned in the report, such as the organization and linking-up of hospitals in different districts, and the control of co-operative schemes for cutting down expenditure. It advised that the commission should be formed on the lines of the University Grants Committee, should be appointed by the Minister of Health, and should consist of not more than twelve members, of whom the chairman and three others should be selected by the Minister of Health, and one by the Secretary for Scotland, and that of the remainder one should be nominated by the Joint Committee of the Red Cross Society and the Order of St. John of Jerusalem; and one each by King Edward's Hospital Fund for London, the British Hospitals Association, the Royal College of Physicians, the Royal College of Surgeons, the British Medical Association, and the Scottish Committee of the British Medical Association. It further recommended that service on the Hospitals Commission should be voluntary, but that it should be advised by a technical expert, should have a small clerical staff, and that its expenses should be borne on the votes for the Ministry of Health.

The following nominations have been made:

The Earl of Onslow (Chairman); Lord Clwyd; Captain W. E. Elliot, M.C., M.P.; Sir Robert Hudson, G.B.E.; Mr. D. O. Malcolm. Nominated by the Minister of Health.

The Marquess of Linlithgow. By the Secretary for Scotland.

Sir Napier Burnett, K.B.E., M.D., F.R.C.S. By the Joint Committee of the British Red Cross Society and the Order of St. John of Jerusalem.

Sir Cooper Perry, M.D., F.R.C.P. By King Edward's Hospital Fund.

Mr. H. Wade Deacon, C.B.E. By the British Hospital Association.

Sir John Rose Bradford, K.C.M.G., C.B., F.R.C.P. By the Royal College of Physicians of London.

Sir George Makins, G.C.M.G., C.B., F.R.C.S. By the Royal College of Surgeons of England.

Dr. R. A. Bolam, O.B.E. By the British Medical Association.

The remaining member will be nominated by the Scottish Committee of the British Medical Association, whose nomination has not yet been notified.

Mr. L. G. Brock, C.B., Ministry of Health, has been appointed Secretary to the Commission.

THE Congress of the French Association for the Advancement of Science will be held this year at Rouen from August 1st to 6th.

THE second Congress of the Association of French-speaking Gynaecologists and Obstetricians will be held in Paris from September 29th to October 1st. Discussions will be held on the following subjects: Disturbance of the thyroid function in pregnancy, introduced by Fruhinholz and Parisot (Nancy); medical and social protection of the pregnant woman, introduced by Doléris (Paris), and Woegeli (Geneva); indications for abdominal hysterectomy in labour apart from pelvic deformities, to be opened by Couvelaire (Paris) and Henrotay (Antwerp); and hysterectomy in acute puerperal infections, to be opened by Cottes (Lyons), and Potvin (Brussels). The subject of radium therapy will be discussed under three heads: first, in uterine fibroids, opened by Faure (Paris); secondly, in cancer of the body and cervix, introduced by Hartmann (Paris); and thirdly, in metrorrhagia, apart from cancer and fibroids, introduced by Koenig (Geneva).

INTERNATIONAL CONGRESS OF THE HISTORY OF MEDICINE.

THE Second International Congress of the History of Medicine was opened in Paris on Friday, July 1st, by M. COVILLE, Director of Higher Education. Professor JEANSELME, President of the French Society of the History of Medicine, welcomed the members, who included representatives of Great Britain, Belgium, Holland, Italy, Switzerland, Spain, Portugal, Denmark, Czecho-Slovakia, Rumania, Armenia, and Greece. Dr. TRICOT-ROYER, the president of the first congress, who represented Belgium, responded, and was followed by representatives of the other countries.

General Sessions.

The first meeting for discussion was held in the afternoon under the chairmanship of Dr. SINGER (London), who made some observations on a manuscript attributed to Guy de Chauliac; Dr. J. G. de LINT (Holland) read a paper on anatomical terms used in ancient Egyptian literature, which broke new ground in Egyptian medical archaeology. Afterwards Dr. FERNANDEZ D'ALCALDE (Spain) gave a description, illustrated by models, of various statutes and seals of the chief ancient universities and seats of medical learning in Spain. Dr. BASMAJAIN (Constantinople) contributed some notes on ancient Armenian medicine, which appears to have drawn its inspiration from early Syrian and Arabian sources.

In the evening, on the invitation of Dr. Henri de Rothschild, the members of the Congress attended a gala performance at the Théâtre du Gymnase of *Le Caducée*, by "André Pascal." This remarkable drama has excited much comment in medical circles in Paris, as the play centres round an episode in the life of a young surgeon who, when financially pressed, is persuaded to perform an unnecessary operation on a wealthy young lady for a large fee. The patient succumbs immediately afterwards, and the operator decides to put an end to his life by injection of a toxic serum. Although his intent is suicidal, he leaves a statement to the effect that he had inoculated himself in the interests of humanity.

Dr. TRICOT-ROYER presided over the meeting on Saturday morning, when a number of papers were read. Dr. DUBREUIL-CHAMBARDEL described the infirmaries of abbeys in the eleventh century, and Dr. VILLARET read a paper on the origin of intravenous injection, which excited some discussion. In the afternoon the members of the Congress visited the St. Louis Hospital and were conducted over the old building, which was used for plague patients during the great visitations in Paris. Afterwards visits were paid, under the guidance of Dr. Fosseyeux, to the Salpêtrière and the Maternité. In the evening a soirée was given by the Cercle Artistique et Littéraire; the programme consisted of recitations written and composed by medical men, and the music was provided by the Orchestre Médical, under the direction of Dr. Henri Busser. During the evening recitals were given by artists of the Comédie Française.

On Sunday, July 3rd, an excursion was made through some of the most beautiful parts of the country around Paris, including Malmaison and St. Germain-en-Laye, where the visitors were met by M. Solomon Reinach, who took them over the National Museum of Antiquities; the return journey was by Versailles.

Dr. GIORDANO (Venice) presided over the meeting on Monday morning, July 4th, when various papers were read. Dr. BERTRAND spoke on the history of the plague in Antwerp, M. BUCHET traced the history of the druggist, and Dr. DELAUNAY read a paper on travelling doctors in the Marne under the ancient régime. Dr. DORVEAUX contributed a paper on the surgeons of Metz, and Professor LAIGNEL-LAVASTINE discoursed on psychiatry in France in the eighteenth century. In the afternoon the members met at the Musée Carnavalet, and from thence went to the Louvre, where M. POTTER explained the Greek antiquities, M. MARCEL AUBERT the sculpture, and M. GUIFFREY the pictures. This was followed by a visit to the Bibliothèque Nationale, where M. Omont, the Director of the Department of MSS., received the visitors and showed them a number of the rarer MSS. on medicine, surgery, and botany.

On Tuesday, July 5th, when Dr. CUMSTON (Switzerland) was in the chair, Professor GUIART read a paper, illustrated with lantern slides, on obstetrics in ancient Egypt; he traced the history of accouchement from the time of Amenophis III, representations being shown from sculptures in the birth houses in ancient Egypt. Afterwards Mr. C. J. S. THOMPSON, M.B.E., Curator of the Wellcome Historical Medical Museum, London, gave an account of the pomander as a link in the history of preventive medicine, tracing the use of aromatic and antiseptic substances from the Egyptian period to the present time. On the afternoon of the same day Professor JEANSELME made an interesting communication on dietary in the convents and hospitals in the Byzantine times. Later in the afternoon the members of the Congress attended a reception given at the Hôtel de Ville by the Municipal Council of Paris. In the evening Prince Roland Bonaparte gave a reception to the members of the Congress at his house in the Place d'Iena, which contains a library famous for its collections of cartographical and geographical works.

On Wednesday Professor GUIART (Lyons) presided, and Dr. FOSSEYEUX read a paper on medicine in Italy in the time of Dante, and gave an account of the Salpêtrière in the eighteenth century. A number of other papers were read, among them one by Dr. BOUVET on medical and pharmaceutical advertisements in journals of the seventeenth and eighteenth centuries. At the closing session on this day it was decided to hold the third meeting of the congress in London next year. At a banquet in the evening at the Palais D'Orsay, cordial thanks were rendered by the delegates to the presidents, Professors Jeanselme and Menetrier, and to the general secretaries, Professor Laignel-Lavastine and Dr. Fosseyeux.

Museum.

The museum of historical medical objects, lent by various institutions and members, was arranged in a large room in the School of Medicine. It included a fine collection of medical coins, medals, and plaquettes lent by Professor Gilbert and Dr. Desnos. Early printed and rare books on medicine and surgery were lent from the library of the Faculty of Medicine, and a collection of medical *ex-libris* by Dr. Olivier. Dr. Paul Richer lent some fine examples of his work as a designer of medical plaquettes, and an interesting collection of prints and caricatures. A large collection of surgical instruments of the eighteenth and nineteenth centuries was exhibited by the Faculty of Medicine of Paris, medical autographs by Dr. Wickham, and some fine specimens of the coloured plates of D'Agoty by Dr. Villaret. Dr. Guelliot lent an interesting collection of Roman bronze surgical instruments and antiquities excavated at Rheims. Dr. Harmonic exhibited his fine collection of medical antiquities. It comprised some interesting French microscopes of the eighteenth century, bronze mortars of the sixteenth and seventeenth centuries, Greco-Roman surgical instruments, Persian anatomical drawings of the sixteenth century, some curious specula of the sixteenth and seventeenth centuries; artificial limbs of iron as figured by Ambroise Paré, sixteenth century; ancient appliances for reducing fractures, seventeenth century; two accouchement chairs, one of which was a portable contrivance for use by the midwife. Professor Laignel-Lavastine lent a medallion of Baron Larrey, and some curious wooden urinals used for infants. Professor Gilbert lent medicine chests and cases of the seventeenth century.

An anatomical figure or manikin of ivory and an amulet of St. Georgan was lent by the École de Médecine of Rouen. Dr. Coulomb exhibited his interesting collection of artificial eyes, consisting of the eyes inserted in ancient Egyptian mummy cases, Utchat eyes in faience, and the artificial eyes of more recent times. A collection of Japanese inros or medicine boxes of fine lacquer was exhibited by Dr. Ancelet, a number of ancient medical seals by Dr. Mauclair, and statuettes of St. Antoine and St. Roch, the patron saints of plague, were lent by the École de Médecine et de Pharmacie of Rouen. The Administration Générale de l'Assistance Publique exhibited a number of prints and the seal and portrait of Baudeloque. A collection of old pharmacy jars, mortars, old drugs and books were lent by the Pharmacie Centrale de France. Dr. Berillon exhibited a large collection of charms and amulets. It is hoped to form eventually a permanent museum of the history of medicine at the École de Médecine.

British Medical Journal.

SATURDAY, JULY 16TH, 1921.

SECURITY OF TENURE FOR MEDICAL OFFICERS OF HEALTH.

"IN order that medical officers of health may be able to discharge their duties without fear of personal loss they should not be removable from office by any Local Authority, except with the sanction of the Central Authority." These words were written in the year 1871 and appear in the second report of the Royal Sanitary Commission over which Sir Charles Adderley presided; it recommended the appointment in all sanitary districts of medical officers of health and inspectors of nuisances. The Government of the day agreed to make these appointments, though not on the terms recommended by the Royal Commission; it insisted instead that they should be made for limited periods only and that at the end of the period the officer might or might not be reappointed. The effect of this was that a medical officer of health who happened in his zeal to offend a member or members of the electing authority failed to secure reappointment.

The position of many of these officials became so unsatisfactory that about twenty years ago an appeal was made to the British Medical Association in the hope that it might be able to secure some remedy. Either on its own initiative or jointly with the Society of Medical Officers of Health the Association urged upon successive Presidents of the Local Government Board the need for reform, but it was not until Sir (then Mr.) Herbert Samuel became President that any headway could be made. From early in the century until 1913 the Association has promoted bills in Parliament almost every session, and considerable expenditure has been incurred in the endeavour to meet the views of the draftsman of the Local Government Board. It was all of no avail; the Board would give no support to any of the Association's bills. In June, 1914, the Association arranged for a deputation to interview the Chancellor of the Exchequer (Mr. Lloyd George), the President of the Local Government Board (Mr. Herbert Samuel), and the President of the Board of Education (Mr. J. A. Pease). The deputation was joined by representatives of the Society of Medical Officers of Health, the Sanitary Inspectors' Association, and other bodies, and it was introduced by Sir Philip Magnus, who had charge of the bill of the Association in the House of Commons in 1913. So convincing were the arguments of Sir Philip and of Dr. Addison, at that time a private member, and of others, that an undertaking was practically given that the Local Government Board would make an Order having for its object the remedying of the grievances presented to the Ministers.

During the war nothing could be done, but in 1919 Sir Philip Magnus pressed for the fulfilment of the promise made in 1914, and after further stimulating questions in the House of Commons the Order was made on April 12th of this year. The Public Health Committee of the Association had learnt early in the year that the Order would relate only to newly appointed medical officers of health, and that those in office could still be dismissed by the local authority without any power of appeal to the central authority, whatever might be the alleged cause for dismissal. The Committee acted promptly and drafted a bill, which was introduced in the House of Commons by Sir Philip Magnus on April 12th. On April 14th it was read a second time and referred to Standing Committee D. It came before this Committee on May 26th. There are some fifty members on this Committee, and Sir Philip wrote a personal letter to each one of them asking for their attendance. There was opposition from the representatives of large towns and others, but eventually the measure was reported unanimously and read a third time in the Commons on June 3rd. On June 7th it was introduced in the House of Lords by Lord Gainford, who, as Mr. J. A. Pease, was one of the Ministers who heard the deputation in 1914. By this time there was growing up some opposition to the bill outside Parliament, and the Westminster City Council presented a petition against it; its passage through the House, however, was not delayed, for it was read a second time on June 28th, passed through Committee and was read a third time on July 5th, and is now awaiting the Royal assent. It is very unusual for a private bill to pass through all its stages so rapidly as this measure, but it must not be supposed that it achieved success merely through luck. Not being a Government measure it had to take its chance on the Orders of the day, and Sir Philip Magnus and Lord Gainford had to be most assiduous in their attendance in order that when it was reached they might be present to pilot it over the rocks of any opposition that might be raised.

It is to be regretted that the bill as drafted by the Public Health Committee of the Association had to be amended in several important particulars in its passage through Parliament. The Committee desired that security of tenure should be given to all medical officers of health and sanitary inspectors, but had not foreseen opposition from unexpected quarters which had to be met. The appropriate clauses referred to "a medical officer of health" and "a sanitary inspector"; amendments altered "a" to "the" in both cases, and introduced a clause distinctly stating that the provisions of the bill applied only to one sanitary inspector in a district. This is much to be deplored, for there are some districts in which, though there are several inspectors, there is no one of them who is senior to the others. However, those to whom the care of the bill had been entrusted felt that it would be the best policy to take a part of what was sought rather than to imperil the bill by demanding the whole. Another amendment which had to be agreed to in order not to endanger the passage of the bill excludes those districts in which a contribution from Exchequer grants towards the salary of a medical officer of health or sanitary inspector is not received.

The passing of this bill is a distinct triumph for the British Medical Association. It was drafted by the Association, and the arrangements for its introduction in the House of Commons were made by the Association officials; later on assistance was given by other bodies, for which the Association is grateful.

The thanks of the public health service are due to those members of Parliament who backed the Association's bill—Sir Henry Craik, Lieut.-Colonel Raw, Sir James Remnant, Mr. Myers, and Captain Walter Elliot, whose names indicate clearly that the measure was supported by members of all political parties.

Congratulations and thanks are more especially due to two persons. Dr. Herbert Jones, Medical Officer of Health of the Herefordshire combined districts, as a

member and for some years chairman of the Public Health Committee, made this matter peculiarly his own. His keenness, assiduity, and diplomacy have at last received the reward which has often seemed to be within reach but has always hitherto been withheld. Sir Philip Magnus's services in the parliamentary sphere have been no less devoted and prolonged, and his help has always been given in such a way as to suggest that it was given *con amore*. He now has the satisfaction of having placed to his credit a solid parliamentary achievement for which his constituents, the public health service, and the Association, of which he is an honorary member, are very grateful.

MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE Museum of the Royal College of Surgeons of England is the largest medical collection in the British Empire and one of the most important in the world; it is based on the collection formed by John Hunter, which, after his death, was purchased by the nation for £15,000. Parliament also made contributions towards the erection of a suitable building for housing the collection, but its maintenance and the provision of the extended accommodation needed for its proper display as it grew have been charges upon the funds of the College. It is very much more than a museum for surgeons; it contains a series of specimens illustrating comparative as well as human anatomy, and medicine as well as physiology. It is, indeed, curious to note that among the original terms and conditions was one directing that the collection should be open "for inspection and consultation of the Fellows of the College of Physicians," as of "the Members of the Company of Surgeons and persons properly introduced by them."

Year by year additions have been made to the collection, chiefly by gifts from Fellows and Members of the College; occasionally larger contributions and series of specimens have been presented, such as that given in 1905 by Sir R. Havelock Charles, consisting of 248 skulls and other specimens representative of the many castes and tribes in India. The most recent large addition and the most important gift received during the year 1920–21 is the series of specimens illustrating the anatomy of the nose and its accessory sinuses formed by Professor Onodi of Budapest, who attained world-wide reputation by his writings; it is the most complete collection of preparations ever made to illustrate the anatomy of the nose. Professor Onodi died in November, 1919, and his son brought the collection to England with the view of selling it. Sir StClair Thomson and Mr. Philip Franklin advanced £250 to secure the retention of the collection in England; this amount, and £32 more, was obtained by public subscription, the surplus being handed to the College to defray the cost of printing a descriptive catalogue. In the condition in which they were received the specimens were unfit for exhibition, being still in a rough undissected state, and the conservator estimated that the cost of mounting and displaying them would be not less than £650. There are 400 specimens in the collection, half being dried macerated specimens, and the other and more valuable half being preserved in alcohol. Mr. Henry Wilson, the prosector, is engaged in giving the specimens a finished form, a laborious undertaking which will occupy the greater part of two years. Mr. T. B. Layton, F.R.C.S., is assisting the conservator in preparing a descriptive catalogue.

The War Office collection of pathological specimens is still in the custody of the College, and will probably remain in its keeping at least for the immediate future. The War Office has defrayed the cost of preservatives and glass jars, and has lent a skilled worker to help in mounting and arranging the specimens; but, even if the Treasury should make a considerable financial allowance, the completion and cataloguing of this unique and valuable collection and its upkeep will entail a considerable annual drain on the funds of the College. Mr. Cecil Beadles, who is engaged by the War Office to continue the preparation of specimens—a task on which he has been occupied for five years—reports that during the year 315 specimens were mounted and added. They include a series of brains and skulls illustrating all kinds of gunshot injuries, and a series of lesions of the intestines, including the various forms of dysentery, typhoid and paratyphoid fever, and bilharzia.

The original Hunterian collection contained a small number of human skulls and skeletons, but by the efforts of a succession of conservators, extending over a century and more, the College now possesses the most representative and valuable collection of this kind in the British Empire—perhaps in the world. The need for a new descriptive catalogue has been felt by workers both at home and abroad, and at the suggestion of Professor Karl Pearson the Council of Scientific and Industrial Research has agreed to the engagement of Miss M. L. Tildesley, trained under Professor Pearson, and have undertaken to pay a salary of £200 for the first year. She began work last October, but the task before her is a large one, and it is hoped that the annual grant may be renewed. For many years it has been the custom to accept and preserve all human remains found in Great Britain in circumstances which gave a clue to their date. From the evidence that has been accumulated Sir Arthur Keith has become convinced that definite changes, particularly in the face and jaws, have been taking place in a large proportion of the British people during the last century or two, but the date at which these changes began and their exact nature and extent can only be determined by a systematic examination of the material; this is now in progress.

A number of researches have been carried on by voluntary workers, and the conservator has continued investigating parts of the colon removed by surgical operation on account of disease. As the prosector's time is fully occupied in the preparation of the Onodi collection it has been necessary to suspend this work.

Professor Shattock, F.R.S., the pathological curator, reports that a large number of specimens were received and added to the collection, and Mr. Burne states that good progress has been made in cataloguing the physiological series. Sir Rickman Godlee has enriched by many interesting gifts the collection of surgical instruments, which is now very extensive and is being catalogued by Mr. Alban Doran. The report of Sir Frank Colyer, the honorary curator of the odontological collection, shows that progress has been made in the arrangement and cataloguing of the collection. Formerly an annual exhibition of specimens added to the collection during the year was held in July, but last year it was postponed until October, and this plan will be followed in future. The exhibition for the current year will last from October 3rd to November 5th, and Sir Arthur Keith will make the recently added specimens the subject this year of the series of demonstrations which, as conservator, he gives each autumn.

THE NEWCASTLE MEDICAL INSTITUTE.

THE new Medical Institute at Newcastle-on-Tyne will be opened by the Right Hon. Sir T. Clifford Allbutt, K.C.B., F.R.S., on Tuesday, July 19th, at 3.30. The institute is the gift of Dr. J. W. Smith of Ryton-on-Tyne, a former President of the North of England Branch of the British Medical Association, and is a memorial to his son, Dr. J. Wilkie Smith, a young man of great promise, who died some six years ago. The hope of the donor is not only that the institute will provide a social and scientific centre, but also that the members will not forget the cognate sciences, and will find interest also in philosophy, literature and music. All members of the Association attending the annual meeting have been made honorary temporary members of the institute, and will be welcome at the inaugural ceremony. The institute is at 7, Windsor Terrace, Newcastle, and provides a library and lecture rooms, dining-room, lounge and billiard rooms, and bedrooms for country members. A committee, of which Mr. Grey Turner, F.R.C.S., is chairman, has prepared a guide book to Newcastle, which will be presented to members attending the annual meeting. It contains a brief history of the city and its principal institutions, and is illustrated by a series of blocks by Bewick lent by Mr. Basil Anderton, M.A., and by a number of photographs, including several of the Roman Wall, to which an excursion will be made on Saturday, July 23rd.

INFANT WELFARE CONFERENCE.

THE second English-speaking conference on infant welfare was held in London during the first week of July under the presidency of Viscount Astor. The main discussions were three in number, and to each of them a whole day was devoted. One was on the question of residential provision for mothers and babies, another on the milk supply in its physiological and economic aspects, and the third on inheritance and environment as factors in racial health. Viscount Astor, in his address from the chair, urged that in infant welfare the nation had an example of anti-waste policy in its highest expression. The country, he said, could not afford to lose the progress it had made during recent years; the great foe was public apathy, and somehow the public mind must be brought to appreciate the unseen triumphs of preventive medicine. The first discussion at the conference took place under the chairmanship of Sir George Newman, and the principal paper was read by Dr. Janet Campbell, who said that the Ministry of Health had now recognized between sixty and seventy maternity homes, with about 700 beds, in England and Wales, and over twenty proposals for new homes were under consideration. All this was in addition to the old-established maternity hospitals and Poor Law lying-in institutions. She considered that the progress of midwifery was slow in comparison with the progress made in the practice of surgery, particularly in regard to the prevention of infection and the elaborate training of medical students and nurses in surgical technique. Other contributors to the same discussion were Dr. C. J. Macalister and Dr. H. B. Gladstone, both of whom dealt with the provision for ailing children; while Dr. Eric Pritchard, chairman of the National Baby Week Council, followed up the discussion with a lecture on common infections in mother and child. In the discussion on the supply of milk not only the point of view of the physiologist and economist, but also that of the municipality and the producer, was canvassed, and among those who took part in the discussion was the Honourable Nathan Straus, the founder of the infant milk dépôts in the United States, whose dépôts with their attached laboratories in New York City have recently been taken over by the municipality. The final discussion of the conference, on inheritance and environment as factors in racial health, was opened by Dr. Helen MacMurchy, chief of the Child Welfare Division of the Canadian Department of Health, and it ranged over topics as diverse as the influence of the weather on the mortality and morbidity of early infancy and the ignorance of mothers in Poland. Dr. Gordon Ley entered into a comparison between working-class mothers and those of the educated class from the point of view of difficulty in labour and lactation; Dr. J. H. Sequeira dealt with the influence of syphilis as an antenatal factor governing racial health; and Dr. John Adams described the work done for the syphilitic mother and her infant at the Thavies Inn centre for pregnant women. A child welfare exhibition arranged in association with the conference was opened by Sir Alfred Mond. Of all the many subjects which engaged the Ministry of Health, he said, none yielded more satisfaction than maternity and child welfare work, but no Government department, however anxious, could produce the far-reaching organization required to assist the million babies who were born each year, and therefore voluntary work, as exemplified in the exhibition, had its great opportunity. The exhibition followed the now familiar lines of infant consultations and clinics, lectures on infant care, and exhibits, with very graphic charts and models, in which the art of the poster was displayed to the utmost advantage, to bring home to the poorest intelligence the principles of mothercraft.

PRIESTLEY'S LAST PHASE.

THAT the discoverer of oxygen in 1774, after but two years devotion to chemistry, was twenty years later obliged by the storm raised by his activities in "the sterile regions of polemic divinity and the still more thorny paths of polemic politics" to leave this country and end his days in America is a story now largely forgotten. The history of the ten years' residence in the United States (1794–1804) is sympathetically told by Mr. Edgar F. Smith, of the University of Philadelphia, in a well-written booklet, *Priestley in America*.[1] Priestley was a nonconformist minister and a teacher in Warrington, and in 1780 moved to Birmingham where his "beloved theology" so enraged the mob that his house, his scientific instruments, and the places of worship where he set forth his obnoxious doctrines were destroyed in 1791. There is a picture in the Wellcome History Museum of Priestley playing backgammon with his wife when the news of the attack imminent on his house arrived; and it is indeed a strange irony of fate that with a most peace-loving nature his reputation is that of perhaps the most cantankerous man of his time. After lingering some time, though with feelings of bitterness from his experiences, he sailed in 1794 for New York, where he was received with open arms and addresses of welcome by Governor Clinton, the Bishop of New York, the Democratic Society of the City, the Tammany Society, and other learned, including some medical, bodies. Benjamin Franklin, whose friendship he had made years before in London, was now dead, but he had many friends, among them Benjamin Rush, who subsequently attended him for a severe pleurisy, and bled him seven times. The professorship of chemistry at Philadelphia was declined, as he disliked the quaker city, probably because of the inhabitants' love of bright colours and extravagant dress. He, however, spent much of his time there, and, though he was chiefly interested in religion and preaching, which led to unpleasantness with the Baptist ministers, began experimental work again, and in 1797 and 1800 published pamphlets on phlogiston, with the result that a considerable amount of criticism was aroused among the chemists of America. His literary activity, especially on religious subjects, was remarkable, and on the day before his death, from dropsy and a cough, "perhaps from a translation to the chest," he revised his *Annotations* on the Old and New Testaments, and an hour before he breathed his last,

[1] *Priestley in America, 1794–1804.* By Edgar F. Smith. Philadelphia: P. Blakiston's Son and Co. 1921. (Cr. 8vo, pp. 173. 1.50 dols. net.)

on February 6th, 1804, "dictated in good language some notices which he wished his son, Mr. Priestley, to add to his unpublished works."

AN INDEX TO CURRENT MEDICAL LITERATURE.

THE *Journal of the American Medical Association* has long published lists of articles in current medical periodicals; for a time it issued also a semi-annual index to all articles in these lists and to papers appearing in its own original department. Subsequently it began the publication of a *Quarterly Cumulative Index to Current Medical Literature*, a publication now in its sixth volume. Authors and subjects are arranged under one alphabet. The April number is an index to journals printed during January, February, and March; the July number contains entries for the first six months, and the October issue contains entries for nine months and supersedes the July. Each quarterly number is thus an index to the literature of the year down to the month of publication. The January issue is an index to the literature of the preceding year; it is bound in cloth for permanent preservation. This bound volume for 1920 contains, it is stated, the titles of about 29,000 articles appearing in, approximately, 3,350 issues of over 200 periodicals. In the main index, that to current medical literature, subjects and names are given in a single alphabetical list; but each paper appears twice, once under the subject and once under the name of the author. This is, we believe, the only satisfactory way of making a really useful index, since the searcher may be looking for all the papers on a particular subject, or for a paper by some particular writer. The list of journals indexed is comprehensive and all titles are given in English, whatever the original language. There are two lists of books, one under the authors' names and the other under subjects. A list is given of Government documents of interest to the medical profession published in the United States, but not in other countries; the task of making a complete list for all countries would undoubtedly be difficult, and probably not worth the labour that would be involved. We are told that the number of subscribers to the *Cumulative Index* in this country is very small, but we are sure that its merits have only to be better known for the number of subscribers to increase. The annual subscription, which should be made payable to the American Medical Association, 535, North Dearborn Street, Chicago, Illinois, U.S.A., is 6 dollars, with 50 cents. extra for foreign postage.

HEALTH OF EUROPEAN OFFICIALS IN WEST AFRICA.

THE return showing the vital statistics of non-native officials in West Africa for 1920 has been issued by the Colonial Office.[1] The notes accompanying the statistics state that a considerable advance towards normal conditions in West Africa was made in the year under review, and the staffs generally were brought up to their full establishment. Over 800 appointments were made in 1920; this gave a net increase of 439, and brought the staff at the end of the year to the highest figure it has ever reached. There were 44 deaths, giving a death rate of 16.3 per 1,000 as compared with 12.5 in the previous year. This rise, however, was partly due to the fact that the number of deaths (8) from accident or suicide was exceptional. Of the 36 deaths due directly to disease 11 were caused by blackwater fever, as against 8 in 1919. On the other hand, the invaliding rate shows a considerable improvement; it fell from 27.5 per 1,000 in 1919 to 22.7. Since 1904, when the invaliding rate was 67.2 per 1,000, there has been a steady downward tendency. The average number of non-native officials in the service in 1920 was 2,687, made up as follows: Gambia 43, Sierra Leone 236, Gold Coast 725, Nigeria 1,683.

[1] Cmd. 1330. To be purchased through any bookseller or direct from H.M. Stationery Office. Price 2d. net.

THERAPEUTIC PROTECTION AGAINST X RAYS.

AUER and WITHERBEE[1] in an article entitled "Studies on decreasing the reaction of normal skin to destructive doses of *x* rays by pharmacological means and on the mechanism involved," describe a series of experiments carried out at the Rockefeller Institute for Medical Research, which have a special and practical interest at the present time. They found that rabbits previously sensitized by injections of horse serum acquire in the majority of instances a remarkably increased resistance to doses of *x* rays that destroy the tissues of normal control rabbits and of rabbits that receive a single injection of 10 c.cm. of horse serum thirteen days after the application of *x* rays. It was also proved that the protection against the effects of *x* rays, conferred by previous sensitization, is largely abolished if the animals are reinjected with serum after *x*-ray treatment; in other words, if they are subjected to an anaphylactic reaction, which, it may be inferred, functionally removes the anaphylactic antibodies locally fixed in the tissues and providing protection against massive doses of *x* rays. Previous sensitization with horse serum is estimated to reduce the lethal action of 30 skin units (Witherbee-Remer formula) to the level of 10 to 15 skin units. This increased resistance, due to the anchoring of anaphylactic antibodies to the cells in the subsequently *x*-rayed area, and not to the presence of these antibodies free in the circulation, is a non-specific reaction, because the abnormal response is called forth not by the sensitizing substance but by an utterly unrelated physical agent. The reason why injection of serum after the *x* ray exposure fails to protect appears to be that the cells of an *x*-rayed area are unable to produce anaphylactic bodies or to fix them when present in the circulation. It is probable that a similar increased resistance to the destructive effects of *x* rays can be obtained in man, and that in the future it may be utilized in cases of inoperable malignant disease in which the applicable dose of *x* rays is directly limited by the resistance of the skin overlying the neoplasm. It is not known whether the resistance of malignant cells is increased in the same way as that of the skin by injection of serum. This could easily be determined experimentally, and obviously must be decided before any attempt to employ this method in practice is made. The possible objection that heavy doses of *x* rays might induce malignant disease of the skin appears unlikely to hold good as no such change occurred in rabbits after 300 days, which, considering the relative life of rabbits and man, corresponds to a much longer interval in the human species. Inasmuch as the injection of serum to increase the resistance of the skin and so to enable massive doses of *x* rays to be employed in inoperable malignant disease would be the last scientific effort to obtain alleviation, any objection based on the drawback of rendering the patient sensitive to horse serum should have little or no weight.

CONCERNING OBSTRUCTIVE JAUNDICE.

IT is not generally realized that a very small amount of liver is sufficient to eliminate the bile and so obviate jaundice; and it is often categorically stated that in man local obstruction of an intrahepatic bile duct produces jaundice. Dr. Peyton Rous has been carrying out a series of experimental researches on the pathology of hepatic disorders, at the Rockefeller Institute for Medical Research, and after the completion of an investigation into the effect of ligature of the bile ducts in the production of biliary cirrhosis (vide BRITISH MEDICAL JOURNAL, 1920, ii, 550), he has, with Dr. McMaster,[2] conducted further experiments in order to determine how much biliary obstruction may exist without jaundice resulting. By carefully planned experiments on dogs and monkeys they found that

[1] J. Auer and W. D. Witherbee, *Journ. Exper. Med.*, Baltimore, 1921, xxxiii, 791–814.

[2] P. D. McMaster and P. Rous, *Journ. Exper. Med.*, Baltimore, 1921, xxxiii, 751–750.

three-quarters of the liver can be obstructed without the appearance of jaundice; indeed, in dogs nineteen-twentieths of the liver can be put out of action, as regards secretion of bile, without development of the jaundice that regularly follows obstruction of all the ducts. A number of pathological observations showing obstruction of intrahepatic ducts in man without icterus are quoted to show that the human liver's margin of safety in the elimination of bile is not inferior to that found in dogs and monkeys. In the past jaundice accompanying abscesses or other morbid changes involving a part only of the liver was ascribed to local resorption of bile, but in the light of Rous and McMaster's experimental observations it would appear that there must be some additional and general factor, such as changes in the liver cells or in the bile ducts, or haemolysis. The ability of a small portion of the liver to excrete all the bile probably depends on several factors; the areas of the liver with biliary stasis due to obstruction of the corresponding ducts manufacture less bile, and their dilated ducts press on the branches of the portal vein and so divert some of the portal blood and with it the functional activity to the more normal parts of the organ.

THE BIBLIOGRAPHY OF SIR WILLIAM OSLER.

THE revised and enlarged *Bibliography of the Writings of Sir William Osler,* by Miss Minnie Wright Blogg,[1] Librarian of the Johns Hopkins Hospital, has evidently been a labour of love, for the compiler says that Sir William's words of commendation on the appearance of the earlier bibliography of 730 titles during his lifetime were her chief reward and inspiration. The present bibliography, covering a period of fifty-one years (1870–1921), contains 1,195 titles; this considerable enlargement is due to the inclusion of articles and reviews that have been identified by his friends and pupils, such as A. Malloch and W. W. Francis and others who had certain knowledge that he was the anonymous or disguised author. There are nine titles bearing the date 1920 or 1921, three of them being in Kelly and Burrage's *American Medical Bibliographies*, published in 1920. His last published writing was a review of Stephen Paget's *Life of Sir Victor Horsley*, written for the *Oxford Magazine* in the autumn of 1919, and the last contribution that appeared before his death was an appreciation of the late Dr. C. A. Mercier in our issue of September 13th, 1919. In addition to the 72 pages of the titles of articles there are 15 pages of a subject index which will be of the greatest assistance to those anxious to obtain without loss of time the exact reference to any of Sir William Osler's widely scattered contributions. The frontispiece is a photograph of Sir William in khaki, with his signature and the legend in his handwriting, "A Memory of Canadian Hospital, Cliveden, 1915–1916." The volume, which has for motto "Books are tools, doctors are craftsmen," is appropriately dedicated to Dr. Thomas McCrae, "Friend and Co-Worker of Sir William Osler."

THE EFFECT OF PROHIBITION ON THE INCIDENCE OF PORTAL CIRRHOSIS.

THE effects, good or mixed, of prohibition in the United States of America still excite discussion, and it will be interesting to see fully analysed statistics showing the incidence of those diseases, such as hepatic cirrhosis, peripheral neuritis, tuberculosis, and gout, which appear to be specially related to alcoholism, since the advent of prohibition. An immediate effect was the falling off in the number of street accidents so that accident wards in many large hospitals became almost empty. A longer interval must elapse before it will be possible to estimate the influence of prohibition on chronic disease, but attention may be directed to a short paper by Joseph L. Miller[1] of Chicago on the effect on the incidence of portal cirrhosis. Although formerly spoken of as alcoholic cirrhosis, or whisky or gin drinker's liver, it is now generally recognized that poisons other than alcohol can cause cirrhosis, especially those of dyspeptic origin, and in 1899 Hanot termed this form "Budd's cirrhosis," after the description given in 1857 by George Budd, Professor of Medicine at King's College, London. On the other hand, dyspepsia is extremely common as the result of alcoholic excess, and the only question is how often alcoholism is responsible for cirrhosis. For a number of years Miller has carefully gone into the history of patients with cirrhosis in the Cook County Hospital, Chicago, and has never failed to obtain evidence of alcoholism. From a table of the yearly admissions from 1910 to 1920 of patients with cirrhosis, it appears that there was a rapid fall from 156 cases in 1917 to 87 in 1918, 48 in 1919, and only 19 in 1920. Prohibition did not begin until July 1st, 1919, so the fall in 1918 was due to some other factor and perhaps to closure of the hospital to all but acute cases in the autumn of that year when influenza was rife. The histories of the 19 cases admitted in 1920 all pointed to former alcoholism, but did not show whether this had continued after July 1st, 1919. The noticeable fall of incidence suggests that the cirrhotic process in the liver ceases when alcohol is discontinued, and that in Chicago, at any rate, alcoholism plays a very important part in the genesis of this morbid change. With few exceptions the diagnosis of cirrhosis at the Cook County Hospital means an advanced stage with ascites; and as these cases have almost disappeared, their association with alcoholism seems to be established.

ARSENICAL POISONING IN VINEYARDS.

THE use of various arsenical preparations to destroy insects and fungi by which vines are infested, which is very common in French wine districts, is, it is recognized, not free from danger. As long ago as 1909 a special committee of the Académie de Médecine presented a long report on the subject, and in July, 1916, a law amending that of 1845 on the sale and employment of poisonous substances was passed. It forbade the use of soluble arsenical substances in agriculture but allowed the employment of insoluble arsenical preparations if mixed with coloured and odorous bodies so as to obviate mistakes. The practical application of the enactment has, however, been delayed, and arsenical preparations are still freely sold under various fancy names. Cazeneuve[2] has recently described a small but very fatal outbreak of arsenical poisoning among persons employed on a farm surrounded by vineyards in the commune of Rieux-Minervois, in the department of the Aude. The poisoning, it is believed, was produced by drinking water from the farm cistern, which was found to be so heavily contaminated with arseniate of sodium that a glass and a half contained more than one grain of the salt. The way in which the arsenic got into the water in the cistern was not determined, but occipyral, a highly toxic arsenical insecticide, the exact composition of which is not known, was employed in the vineyards, and it is possible that it was washed into the cistern, which was in the basement, by a rainstorm the day before the explosion of acute cases occurred. The cases were of two kinds—very acute and fatal cases, and those with severe peripheral neuritis, some of them terminating in death. Altogether fifteen deaths occurred. After hearing Cazeneuve's story the Académie resolved to appoint a committee to report on the laxness with which the law is at present administered.

[1] *Bibliography of the Writings of Sir William Osler, Bart., M.D., F.R.S., Regius Professor of Medicine in the University of Oxford.* By Minnie Wright Blogg, Librarian of the Johns Hopkins Hospital. Baltimore: The Lord Baltimore Press. 1921. (Pp. 96. 5 dols.; 2.50 dols. to subscribers.)

[1] J. L. Miller, *Journ. Amer. Med. Assoc.*, Chicago, 1921, lxxvi, 1646-1647.

[2] Cazeneuve, *Bull. Acad. de Méd.*, Paris, 1921, 3e série, lxxxv, 660-671.

"THE JAPAN MEDICAL WORLD."

THE high standing of Japanese medical science is generally recognized throughout the world, and the names of several Japanese research workers are household words among Western medical men, but the West is by no means so intimately in touch with Japanese medicine as is desirable; this is due largely to the language difficulty. As a modest acquaintance with one other European language—rarely in these days with two or more—appears to be about as much as the average British medical man can be expected to gain, our friends of the East have for the past three years included for our benefit an English section in the medical journal, which is published weekly at Tokyo in Japanese. It was felt, however, that this was insufficient, and now, in commemoration of the tenth anniversary of the weekly journal under the editorship of Professor K. Miyajima, there has been successfully produced a monthly medical journal, the *Japan Medical World*,[1] entirely in the English language. Few Englishmen realize that in the empire of Japan there are to-day twenty-two medical colleges, all as admirably equipped for research work as for educational purposes, in addition to special institutions, while the number of Japanese medical men is estimated at 45,000 out of a total population of 55,000,000. The new medical journal is well printed and should prove to be an excellent medium for introducing Japanese medical activities to the notice of the outside world. In addition to a number of admirable original articles—all of which, however, in this number smack more of the laboratory than of the clinic—a summary is given of the more important articles in the current Japanese medical journals, which number nearly a score. The proceedings of almost as many Japanese medical societies are briefly but adequately recorded, and the medical news of Japan is fully dealt with. We hope that such an achievement as the production of this journal will have the success in Britain, the Dominions, and America, that it so richly deserves.

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

Public Health Officers Bill.

ON the motion of Sir Philip Magnus, on July 12th, the House of Commons agreed to some amendments made by the Lords in the Public Health Officers Bill. The measure now awaits the Royal assent.

War Pensions Bill.

Mr. Macpherson, on July 8th, moved the second reading of the War Pensions Bill, which was, he explained, to give legislative sanction to those recommendations in the Departmental Committee's Report (see p. 79) that needed it. The administrative changes in the headquarters of regional offices could be carried through by an instruction that he would issue.

Picturing the magnitude of the work, the Minister said that the three and a half million beneficiaries were equivalent in number to the population of Liverpool, Manchester, Birmingham and Glasgow. Clauses 1 and 2 of the bill were for the reduction and reorganization of local committees. These spent twenty millions a year without direct control. In reconstituting the local committees he proposed to enlarge the representation of ex-service men from one-fifth to one-fourth; and to reduce the representation of the local authority from one-half to what is given on committees under the National Insurance Act; but to make the appointments himself, this being necessary because the areas of local authorities would be mixed. Clauses 3 and 4 were designed to secure final assessments, and thus within a measurable time reduce the machinery to a minimum, enabling payments to be made through the Post Office.

The present system, Mr. Macpherson went on to say, with its periodic examination of men, required an elaborate structure of medical boards, referees, and so forth. The medical machinery of the Ministry had hitherto employed in whole-time, or part-time, one man in every four, or one man in every five of the medical population of the country. The periodical examination of disabled men and officers met annually the equivalent in working time of 20,000 men. Travelling expenses of examiners and examinees and their loss of time represented an enormous amount of money. Even more important was the effect that finality would have on the mind of the man who had hitherto been harassed by medical boards, and the relief it would be to him to get away from the atmosphere of the war and its disabilities. The Minister said that in this proposal he was supported by every single body of public opinion consulted, by members of the House, by the press, by the Departmental Committee (which voted unanimously in its favour) and by the Standing Committee of officers and men. The Labour Party Advisory Committee unanimously recommended that pensions should be made permanent in two years. He proposed to make the period four. At present there was an insuperable difficulty in granting any great number of permanent pensions. He had granted them where cases were clear, such as those of amputation. But permanent pensions granted now were on a rather one-sided basis. Any pensioner if his case got worse could come back to the State and demand more, and he could get it. On the other hand, if he got better he went on drawing a fixed pension—there was no right of appeal on behalf of the State. Under the Government proposal this one-sided process would be abolished, subject to qualifications. The Government actuary had shown that the proper time for examining a man for his permanent pension was four years after his discharge, or after his war service. During the first two or three years after a man's discharge the rate of improvement ranged from 20 to 60 per cent. of the disablement, but after two years it was a very gradual process, and at the end of four, to all intents and purposes, the man's condition became stationary. One important fact, however, had to be taken into account. Many cases were extremely difficult. Newly discovered diseases had arisen in the course of the war. They had actually to add to the medical profession in order to deal with these diseases, and they had had to create new hospitals. Under his proposal a man at the end of four years, however doubtful his case, would have been examined by thirty doctors. At present an assessment was made in 80 or 90 per cent. of the cases to cover one year or more. But, anyway, each man four years after his discharge would have been examined by many doctors. To meet cases of possible unfairness he proposed two things. If the medical board, when examining for a permanent pension, was satisfied that the man might get worse, they were to act on instructions not to make the award permanent. In the second place, he proposed to ask the House to give him power to appoint an independent appeal tribunal. He should hesitate before taking upon himself, unless there were an independent court of appeal, the responsibility of saying that a man was not entitled to any pension. He asked for powers to have this tribunal composed, not as at present, of a lawyer, an ex-service man, and a doctor, but of two doctors, one of whom would be the president of the court, an ex-service man, and an officer. Every discharged man would have the right to go to this court. By making the pension permanent he believed that on a conservative estimate there would be a saving of £2,000,000 annually in administration alone. One other point, however, should be clearly understood. If a man became seriously worse after his permanent pension had been given to him the Minister still retained the rights which he had under Article 6 of the Royal Warrant of dealing with the case. And even if a man's claim had been finally settled he might still, under those rights, be entitled to hospital treatment and to certain allowances, and those privileges he would retain for the rest of his life. Mr. Macpherson further explained that under Article 9 of the Royal Warrant was given a right to every man who served in the British army, even though he was never examined on discharge, to come before a medical board and have all the rights of a man who was examined on discharge. The Labour Party, in a very interesting memorandum, had suggested that a time limit of six months, the same as under the Workmen's Compensation Act, should be imposed on this consideration; but the Government decision was to make the period seven years after service. Unless there were a limit the machinery would have to be kept up indefinitely. Further, he would ask the House to say, in regard to appeals, that there should be a time limit of six months. Under Clause 6 he was proposing to take the same powers of commuting the disability pensions of seamen and marines and officers and men of the mercantile marine, as he already had in the case of soldiers and airmen. His policy was to see that commutation took place as rarely as possible, but there might be cases when it was expedient. Under Clause 7 he was taking powers to get under the Ministry of Pensions those children whom the boards of guardians would permit them to take charge of on the application of the Minister. Clause 8 was one providing for submission to Parliament of all the regulations made under the bill. He reckoned that on a conservative estimate the saving in administrative expenses by doing away with 800 local committees would be between £6,000,000 and £12,000,000.

Mr. Hogge, in a friendly criticism, hoped that the seven years limit would not be made too binding as regards the medical cases, which offered the most difficulty. He hoped that in the rearrangement of the local committees care would be taken not to lose the human touch. He reserved his opinion on various matters of detail until he had had an opportunity of studying the report. Major Cohen, speaking as treasurer of the British Legion of Ex-Soldiers, said they felt that the bill was being rushed forward, but he was glad to learn that the Committee

[1] *The Japan Medical World*. Edited by K. Miyajima, M.D. Vol. i. Annual subscription, Yen 12.00. Published by the Nippon-No-Ikai Sha, Kanda, Tokyo, Japan.

stage would not be taken for a week. The main objection he had to the bill was the clause vesting in the Minister the power of making schemes for establishing committees without reference in any way to the local committees.

Mr. Lawson moved the rejection of the bill, not from hostility to seven-tenths of it, but because it was presented so soon after the publication of the report. He was not in favour of the seven years' limit, and he raised several other points. Mr. Charles Edwards, seconding the amendment, urged that this subject might be more properly dealt with in the autumn recess, instead of in this hurried manner, and then next session they would not have to cancel legislation thus passed. Major Entwistle, who was a member of the Departmental Committee, supported the bill, with explanations of findings, but he offered some criticism on drafting.

Captain Bowyer was concerned at the possibility that with more direct control by the Ministry the findings of medical boards might be more upset even than at present in order to get uniformity of treatment. Major Henderson, who was a member of the Departmental Committee, took up this point as dealt with by the Committee. He said that they were satisfied that no decision of a medical board was overruled unless a man was re-examined by another medical board. There was a good deal of misunderstanding on this subject. The medical boards assessed as to disability but had no authority to decide as to attributability, because that was not entirely a medical question but of military law and other things. That was how it was that sometimes an assessment was reduced. A man should not be told what his first assessment was, but he sometimes overheard it.

Dr. F. E. Fremantle believed that if this bill were carried through it would be one of the Government's greatest achievements, but the matter was of such vital importance on the medical side that it would have to be most carefully considered in Committee. He wished to emphasize a particular point—that medical opinion was above all required on the question of the final award. He should like to know whether there was any foundation from medical evidence, for saying that the four years' limit, leaving out of the question for the moment the seven years, was sufficient for purposes of permanent pension assessment. It was an extraordinarily difficult professional problem to say what was the proportion of cases that might be expected to recur at the end of four years after active service. If they would be only two or three in a million the State had a right to discount them to get finality, but if they proved to be 10 or 20 per cent. it would be absolutely wrong. There were cases where it was perfectly certain there would be recurrence later on. Mental cases would provide the great bulk. A liver abscess might occur many years after serving in the tropics. He had certainly had malaria after he had got home. At the present time the definition seemed to be pure guesswork and dangerous from both points of view—of the pensioner and of the State. He was not sure that it was desirable to have two medical men and no lawyer on the appeal boards—medical men were essentially kind-hearted. The Minister of Health had urged that the department should cut its losses, but there was a danger of making a great loss if this was carried as it stood. He did not see why it should not be possible to put in an amendment that these final awards should be liable to revision in ten years' time. Dr. Fremantle also asked what the Minister meant by the promise to the pensioner that he would be qualified for hospital treatment to the end of his life. If there was the least possibility of any liability for treatment under the pension system for all conditions of disease to the end of a man's life, the department might have to extend the whole of their hospital system and keep it up in all the areas of the country for the next fifty years. They knew that the system of hospitals under the Ministry of Pensions was extraordinarily efficient, and that being so, it would be very jealous of keeping all its cases. Thus they might have a hospital pension system, a voluntary hospital pension system, a Poor Law system, and army and navy hospital. His own feeling was that there ought to be co-ordination of hospital work.

Mr. R. Young, a member of the Departmental Committee, supported the bill. Mr. Hodge, however, entered a protest against its being rushed through the House. Speaking as an ex-Minister of Pensions, he regretted that Mr. Macpherson was not prepared to abolish entirely the regional system.

Major Tryon (Parliamentary Secretary to the Ministry of Pensions) replied for the Government. He assured the House there would be a good lapse of time before the bill was taken in Committee.

Mr. Arthur Henderson entered a further protest against the "rushing tactics" which the Minister had adopted. Within the last half hour he had received a letter from the Association of Local War Pensions Committees protesting strongly against the bill being taken in this way without opportunity being given them to make representations. Mr. Henderson added that many points would have to be raised in Committee, but his party hoped that the bill would be passed into law.

The amendment was withdrawn and the bill read a second time.

Medical Officers in Pensions Department.—Mr. A. T. Davis asked, on July 6th, whether only about 60 per cent. of the doctors employed by the Ministry of Pensions, or under its control, had had overseas experience, and whether, seeing that such experience enhanced the value of doctors in their work for the Ministry in dealing with ex-service men, preference would in future be given on making appointments to those medical men who had had overseas experience. Major Tryon replied that he was unable to state the exact percentage of the total medical staff, whole-time and part-time, who had had overseas experience, but he had ascertained that it was considerably more than 60 per cent. Preference was given wherever possible to medical men who had served overseas; but other important qualifications, such as experience in special classes of disease, had often to be taken into consideration.

Pensions Appeal Tribunals.—Colonel Gibbs stated, in reply to Lieut.-Colonel Sir F. Ball, on July 7th, that the cases listed and in course of being heard by the Pension Appeal Tribunals were 1,134 and 3,071 on March 31st and June 20th, 1921, respectively; the numbers outstanding awaiting listing for hearing on the same dates were 7,734 and 6,779. Of the total number of cases awaiting hearing, a thousand were cases in which the appellants had already been afforded one or more opportunities of appearing before a tribunal. During the latter part of May and in June additional courts were set up, and one thousand cases were now being dealt with each week. Further tribunals were being formed and sittings would be held through the summer vacation; approximately sixteen during August and twelve during September. The number of tribunals to be allocated to London for the holiday period would depend upon the state of the work in London as compared with that of other regions.

Committee on Artificial Limbs.—The Minister of Pensions has appointed a committee to inquire into the arangements for the supply and repair of the various types of artificial limbs which are provided under the Royal Warrants and Orders in Council, and into the comparative advantages of the metal limb and the wooden limb; and to make recommendations thereon. The members of the Committee are: The Right Hon. Sir Archibald Williamson, Bt., P.C., M.P. (Chairman), Professor A. F. C. Pollard, Major Meurice Sinclair, C.M.G., R.A.M.C., Major M. P. Leahy, R.A.M.C. (ret.), Major A. A. Atkinson, R.A.M.C.(S.R.), Sir Lisle Webb, K.B.E., C.B., C.M.G., Director-General of Medical Services, Ministry of Pensions, Mr. Frank Cecil Meech, ex-corporal of horse, Royal Horse Guards. Mr. W. J. Sullings is the secretary of the Committee.

The Regional Medical Officers.—Sir J. D. Rees asked the Minister of Health, on July 6th, whether the thirty-two doctors who were appointed by his predecessor at £1,000 a year were still retained at the Ministry; and, if so, when would their services be dispensed with. Sir Alfred Mond took the reference to be to the regional medical officers, and said he had made clear in introducing the estimates for the Ministry of Health that after personal investigation he thought that this staff did useful work and should be retained. In any case, he was not in a position to dispense with their services, excepting on the terms of their engagements, which would not come to an end for several years. Colonel Ashley asked whether the House was to understand that the Ministry of Health had tied itself down for several years in the engagement of these public officials. Sir A. Mond said that, in view of the fact that most Government officials were engaged for life in the Civil Service, he thought that an engagement for five years in an important office was not an unreasonable agreement. Captain Coote asked whether it was not a fact that the public health had never before been so good as it was at present; and Viscountess Astor chimed in, "Is not infant mortality going down"?

Psycho-analytical Treatment.—Mr. Mills asked if the Minister of Pensions had any results that would justify the continuation of the treatment of ex-service men by the process known as psycho-analysis; whether he had received any protests from men "compelled to undergo this torture"; how many people were under this treatment and what were the qualifications necessary for those experimenting with shattered lives. Mr. Macpherson responded that satisfactory results had been obtained from this form of treatment, which, however, was in no sense compulsory, an essential element being the patient's willing co operation. The treatment was always given by registered medical practitioners specially qualified by previous training or experience. He was unable to state the number of patients adopting the treatment. Mr. Mills inquired whether it was quite clear to the men that the treatment was optional. Mr. Macpherson said that if it were not he would have made it clear. He promised that if another question were put down he would get particulars of the qualifications necessary in the medical men. He expressed his willingness to show to members of the House the hospital methods in this matter.

Scarlet Fever in the Metropolis.—In reply to Mr. Alfred T. Davis, on July 6th, the Minister of Health said that there were approximately 2,000 more cases of scarlet fever in the hospitals of the Metropolitan Asylums Board than at this period last year. Epidemics of scarlet fever tended to recur at intervals of about seven years. The causes of this periodicity were being closely studied but had not yet been fully elucidated. His department was in constant touch with the local authorities in London, and he was advised that the preventive measures taken by the bodies were satisfactory, and that hospital accommodation had been provided by the Metropolitan Asylums Board for the large majority of cases which had occurred.

League of Nations: Health Organization.—Mr. Balfour, on question by Sir J. D. Rees, said, on July 7th, that in pursuance of Articles 23 and 25 the League of Nations was proceeding, as it was bound to do, to set up an International Health Organization. At the present moment the arrangements were in the initial

stage only. Great Britain made a lump sum contribution towards the expenses of the League, no part of it being earmarked to particular branches of the League's work.

Financial Condition of Hospitals in Dublin.—Mr. Devlin repeated to the Irish Chief Secretary, on July 7th, the question he had addressed to the Minister of Health on July 4th as to the financial condition of the hospitals in Dublin. Mr. T. W. Brown, for the Chief Secretary, said that he was well aware of the facts and figures given in the report of the Board of Superintendance of Dublin Hospitals for the year ending March 31st, 1920. He was unable, however, to add anything further to the negative reply which Sir Hamar Greenwood recently gave on appeal, that Irish hospitals should share the grant recommended by Lord Cave's committee, or receive an equivalent grant. Mr. Brown made one correction in the figures given by Mr. Devlin. The deficit attributed to the Westmorland Hospital was that of Dr. Steevens's Hospital. The first named institution had no deficit. In reply to Sir J. Greig, on July 11th, Sir H. Greenwood said that the grants to Dublin hospitals from the Imperial Exchequer originated in a clause of the Act of Union which bound the Parliament of the United Kingdom to continue certain grants made by the Irish Parliament for the maintenance of institutions for charitable purposes. These grants had been paid by the Irish Parliament to the following hospitals which are still in existence—namely: Hospital for Incurables, House of Industry, Westmorland and the Meath Hospitals. The Irish Parliament had also contributed generously to the construction of the Rotunda Hospital. The United Parliament of Great Britain and Ireland was bound to continue these grants for a period of twenty years, but, taking a wide view of the contract, it had, in fact, continued and extended the number of the grants to the present day. The amounts paid to each hospital had varied from time to time, but were finally fixed at their present figures by the Select Committee on Irish Estimates, 1854, as modified by the report of the Royal Commission of 1855. So far as he was aware, neither English nor Scottish hospitals had directly received similar grants, nor had any Irish hospital outside of Dublin received them.

Injury to Sight During Film Production.—Viscount Curzon asked whether the Committee on the Cause and Prevention of Blindness had yet reported upon the question of injury to eyesight resulting from the powerful light used in film production. Sir A. Mond said that the conclusion of the report was that there was evidence only of transient injury to the eyes having occurred in two cases, and that such injury was associated with the use of a particular open arc lamp without a proper screen. He had received an assurance from the Incorporated Association of Kinematograph Manufacturers that no member of the association would permit any open arc lights to be used in their studios for general illumination without glass filters, and he did not consider further action necessary.

Imperial War Graves Commission.—In answer to Mr. Erskine, on July 7th, Lieut.-Colonel Stanley said that the Imperial War Graves Commission had been constituted by Royal Charter, a body corporate with perpetual succession. The total number of the staff was 2,354. This number covered all the later theatres of war, and included the gardening staff of 1,148. The salaries and wages of the whole staff amounted approximately to £377,500. The total estimated expenditure for the current year to be borne by the several participating Governments was £2,366,720.

Married Persons in Lunatic Asylums.—The Home Secretary was unable to state, in answer to a question by Mr. Rendall on July 6th, how many married persons there are in the lunatic asylums in England and Wales, and how many of these had been certified for over five years, but he promised to try to get the information.

The Children Act.—Mr. Swan inquired, on July 6th, whether the Minister of Health had received a representation from the medical officers of health of the country asking that the infant life protection section of the Children Act, 1918, should be amended so as to secure that where a maternity and child welfare scheme was being carried out by a local authority to the satisfaction of the Ministry, such local authority should be made responsible for the administration of Part I of the Children Act of 1908; and whether in view of the fact that this request had emanated from public health experts and of the recent disclosures as to baby farming in Margate, he proposed to take the necessary steps to meet such appeal. Sir A. Mond said he had received the resolution. The matter would certainly be considered when legislation was practicable.

Sanitary Conditions in Private Schools.—On an inquiry by Mr. Swan, on July 6th, whether the Minister of Health would consider the advisability of amending the law so as to enable the medical officers of health to present a regular report as to the sanitary conditions of private schools, Sir A. Mond said that local authorities and their medical officers of health had the same powers regarding overcrowding and sanitary defects in schools as in other dwelling houses. He was not sure that further powers were required, but the point would be considered when the Public Health Act was amended.

Dangerous Drugs Act.—Mr. Alfred T. Davis asked whether the committee appointed to consider objections to the draft regulations issued under the Dangerous Drugs Act, 1920, after considering the claim that prohibition of retailing by pharmacists was *ultra vires* in view of Section 7 (2) of Dangerous Drugs Act, and observing that the point could be settled only by a competent judicial authority, proceeded with their inquiry as if the contentions were not well founded; and whether the Home Secretary had since obtained, or proposed to obtain, the opinion of the Law Officers of the Crown on this contention of the pharmacists. Mr. Shortt said that the answer to the first question was in the affirmative, and to the second in the negative.

Universities of Glasgow and St. Andrews.—Sir R. Thomas asked, on July 6th, whether the Secretary for Scotland had noticed that in the returns from universities and university colleges in receipt of Treasury grant, 1919–20, it was stated, on pp. 271 and 286, that the universities received no grant from local authorities, and that in the statement of accounts on pp. 274 and 288 of the same publication it was shown that Glasgow University received £8,700, and St. Andrews University received £4,500. Mr. Munro said that, in point of fact, no grants were made to the Universities of Glasgow and St. Andrews from local rates. The sums mentioned were annual payments made from the Local Taxation (Scotland) Account (Scotland) Act, 1892, out of the Scottish share of moneys made available by statute for relief of local taxation in the different parts of the United Kingdom. These payments to the Scottish Universities reduced the amount which might otherwise be distributed among local authorities in Scotland in relief of local rates, and, therefore, might be said to represent indirect contributions from the rates to the universities.

Health Conditions in Slate Mines.—Mr. Bridgeman, on June 28th, in answer to Major Breese, said that the revision of regulations for safeguarding the health and providing against accidents to men employed in the slate quarries and mines of the United Kingdom had already been taken in hand, and would be completed as quickly as possible.

Miners and National Insurance.—Sir A. Mond, on a question by Mr. Allen Parkinson, said on June 30th that an insured person who had missed thirteen contributions in the contribution year ending July 3rd, could, in accordance with the regulations, avoid any reduction in benefits during the next benefit year, by the payment of 3s. (if desired in instalments of 1s.) before the end of next November. In view of the easy conditions of payment and the prospect of regular employment in the mining industry during the intervening months, it was not proposed to make any special provision for the miners.

Treatment for Bilharziasis.—Major Tryon informed Mr. Gratton Doyle, on July 12th, that arrangements were being made to provide the modern treatment for men still suffering from bilharziasis contracted as a result of their services in former wars.

Bonuses to Ex-Service Men in Sanatoriums.—Major Tryon stated, on July 12th, in answer to Mr. Alfred Davis, that, as the result of conferences between the Ministries of Pensions, Health, and Labour, the character of the training in individual sanatoriums which will satisfy the conditions necessary for the payment of bonus has been agreed upon; and effect is now being given to the conclusions reached.

Lancashire Sanatorium Benefit Fund.—Sir A. Mond, on July 12th, informed Mr. Walter Halls that he had been unable to allow any of the estimated surplus of the Lancashire Sanatorium Benefit Fund to be applied for the provision of new sanatoriums, as it was contrary to regulations. Substantial grants were available from the Exchequer.

The Services.

DEATHS IN THE SERVICES.

LIEUT.-COLONEL STUART GERALD MCALLUM, D.S.O., R.A.M.C. (S.R.), died while motor cycling on June 3rd, aged 54. He was educated at Edinburgh, where he graduated M.B. and C.M. in 1889, and as M.D. in 1893, subsequently taking also the D.P.H. of the Edinburgh Colleges in 1910 and the certificate of the Medico-Psychological Association. In his early days he specialized in lunacy, and filled the posts of assistant medical officer of the County Asylum at Chester, and of the Cumberland and Westmorland Asylum at Garlands. He served in the South African war in 1902, taking part in operations in Cape Colony, and received the Queen's medal with two clasps. On May 15th, 1901, he took a commission in the Eastern Districts Militia (Colchester) R.A.M.C., and on March 1st, 1903, received a honorary commission as lieutenant in the army. He became captain in the militia in June, 1904, and when the militia became the Special Reserve transferred to that force, attaining his majority on May 15th, 1913. Before the war he was in charge of the military hospital and barracks at Berwick-on-Tweed. He was appointed to the command of a field ambulance, with the rank of lieutenant-colonel, on June 15th, 1917, was mentioned in dispatches in the *London Gazette* of December 30th, 1918, and received the D.S.O. on January 1st, 1919. After the war he was appointed registrar of the Pensions Hospital at Hednesford, and held that post at the time of his death.

England and Wales.

CONFERENCE ON THE FINANCE OF LONDON HOSPITALS.

LORD CAVE'S Committee on Voluntary Hospitals, in reporting on schemes of mass contribution, expressed some doubt whether such schemes could be applied to London. This question was discussed at a conference held at the Mansion House on July 6th, when 154 representatives of ninety-four hospitals were present. Of the twelve large general hospitals with schools, all were represented except Charing Cross (which has preserved, though it is stated in no spirit of opposition, an independent attitude); of the eight large general hospitals without schools, seven were represented; of the thirteen smaller general hospitals, twelve were represented, and a large body of representatives were in attendance from the special and cottage hospitals in the metropolitan area. In addition, King Edward's Hospital Fund for London was represented by Lord Stuart of Wortley, who presided.

Three schemes of mass contribution are referred to in Lord Cave's report. The first is a scheme of organized weekly contributions by wage-earners, without any definite insurance system. The second is the scheme of weekly contributions as carried out by the Radcliffe Infirmary and County Hospital at Oxford, under which contributors pay 2d. a week and are entitled to free treatment, whereas non-contributors are expected to pay towards their maintenance. The third is the Sussex method of voluntary insurance, whereby, in the modified form proposed for London, the contributor would pay 5d. a week as premium and receive other facilities, such as private consultations and dental treatment, in addition to strictly hospital benefits. As was stated last week, the London, St. Thomas's and the Royal Free Hospitals have decided to co-operate in giving this scheme a trial, and the representative of the Westminster Hospital at the conference stated that it was ready to co-operate with other hospitals in its area, apparently in the same scheme.

Lord Stuart of Wortley said that the King's Fund had not pronounced in favour of any particular method, and did not think it necessary that one and the same method should be adopted by all hospitals, especially in view of the peculiar difficulties of London. These difficulties, as they emerged from the discussion, appear to be the lack of municipal patriotism in London and the fact that large numbers of London people reside in one locality and work in another. It was necessary, therefore, to consider London as a whole, although the schemes in various local areas might differ. In some cases it might be most convenient to take the area of the local authority, and in others the district immediately served by a large hospital. The special hospitals have no particular locality, but draw their patients from all parts of the metropolis, and this, as Lord Arran pointed out, further complicates the matter. The merits of the various schemes were considered; more than one representative observed that the first scheme, which proposed to organize on a large scale the weekly contributions of wage-earners, involves no contract, while the Oxford and Sussex schemes both involve a contract; it was contended also that the Sussex scheme meant the raising of the income limit, so that instead of confining hospital treatment to the sick poor it would bring in people in receipt of a considerable income (up to £500 a year for a man with a wife and family).

Mr. E. W. Morris, of the London Hospital, submitted that in the present economic situation such a raising of the income limit was necessary and right, and that the Sussex scheme, by means of insurance during health, would provide the black-coated poor with facilities at present available only for the indigent. Two or three representatives urged that contributions should not be confined to wage-earners, and the Chairman pointed out that Lord Cave's report specifically referred to "moderate and continuous contributions from all classes." Sir William Lawrence said that St. Bartholomew's Hospital would be willing to try the scheme of organized weekly contributions from wage-earners without a definite insurance scheme.

The resolution proposed by Lord Hambleden, and unanimously carried, did not commit the Conference on the insurance principle. The resolution merely suggested that King Edward's Hospital Fund should co-operate with the London Regional Committee of the British Hospitals Association (a committee of some thirty delegates from individual and grouped hospitals), the Hospital Saturday and Sunday Funds, and the League of Mercy, in the organization of local collections from employees throughout the London area.

PROPOSED NOTIFICATION OF MEASLES.

The London County Council on July 12th considered a report on measles from the Public Health Committee. In order to meet the resolutions of a recent conference with the metropolitan borough councils steps are being taken to secure the issue to school teachers and attendance officers of a general instruction enjoining them to acquaint the borough medical officer at once, on forms already used for reporting cases of infectious illness, of all detected cases of measles, with information of any special circumstances within their knowledge, particularly where young children under school age are affected and home conditions are unsatisfactory. It is also proposed, when the disease appears to be increasing in any particular school or group of schools, to secure the immediate following up of all absentees and a report to the medical officer of every case of measles discovered. When measles tends to become epidemic—that is, when the number of cases reported from schools throughout London approaches 1,000 weekly—another scheme is to be put into force entailing close co-operation between school nurses, attendance officers, and staffs of the local sanitary authority. The conference of metropolitan councils also passed a resolution declaring that the notification of measles by the medical profession was necessary to secure the prompt segregation of susceptible contacts and to render efficient any provision of nursing aid by the local authority. The Public Health Committee, however, considered that until more experience had been gained of improved arrangements for the detection and notification of measles through the school organization, it would not be desirable to make measles compulsorily notifiable by medical practitioners. Experience had shown that more complete information with regard to new cases of measles was obtained through the school organization than through compulsory notification. It was, however, recommended that, if so desired by the metropolitan borough councils, the County Council should send to the authorities of all hospitals and general medical dispensaries and to all private medical practitioners in London a communication directing attention to the facilities available through the public health services for the nursing of cases of measles in London.

THE SITE FOR THE UNIVERSITY OF LONDON.

The London County Council has adopted a recommendation of its Education Committee to invite the Board of Education and the Senate of the University of London to explore the possibilities of the Holland Park estate as a site for the new buildings of the University of London before further action is taken with regard to the Bloomsbury site. The Council is interested in the matter as the educational and town planning authority for London, and is of opinion that the Holland Park site, which is easily accessible from all parts of London, would cost much less money while providing a larger area and so affording room for expansion. During the discussion it was pointed out that neither the Government nor the Senate would be likely to recede from the arrangement sanctioned last October.

DIPLOMA IN NURSING AT THE UNIVERSITY OF LEEDS.

The regulations in connexion with the Diploma in Nursing, to which reference was made in this column on June 4th, when the training of nurses in Leeds was being discussed, have now been issued by the University. They are as follows:

DIPLOMA IN NURSING.

Regulations.

1. Each candidate who satisfies the examiners shall receive a diploma, and shall be styled a Diplomate in Nursing, University of Leeds.

2. Before presenting themselves for examination for the diploma, candidates must have completed four years' training in a general hospital recognized by the University for the purpose, and shall have received a certificate to this effect.

3. Candidates shall furnish evidence of having attained an adequate standard in general education satisfactory to the University.

4. The four years' hospital training shall include—

(*a*) Practical instruction and tuition in the following:

i. Ward nursing, medical, surgical and special.
ii. The principles of surgical technique and operation service.
iii. Bandaging and the preparation and use of splints and other appliances.
iv. Invalid cookery.
v. The feeding and management of infants.
vi. The principles of ward administration.
vii. Elementary urine testing.
viii. Preparation for autopsies.

(*b*) Attendance on the following courses of lectures and lecture demonstrations:

i. The Principles and Practice of Nursing	...	20 lectures.
ii. Elementary Anatomy and Physiology	...	20 ,,
iii. Elementary Medicine	...	12 ,,
iv. Elementary Surgery	...	12 ,,
v. Elementary Obstetrics and Gynaecology	...	8 ,,
vi. The management of infancy and childhood		6 ,,
vii. Elementary Hygiene	...	8 ,,

Candidates shall furnish certificates of such attendance and of having passed satisfactorily a class examination in each subject. At least three months must be spent in attendance on courses in the University of Leeds (for this purpose lectures delivered in the Leeds General Infirmary shall be deemed to have been delivered in the University of Leeds). The number and the character of the courses shall be determined in each case by the University.

5. Candidates must also attend a course of lectures in the University of Leeds on social economics or some other approved subject.

6. A nurse may be registered as a candidate for the examination *at any time* after she has been accepted for full hospital training, upon (*a*) payment of a registration fee of 5 guineas; (*b*) producing the necessary evidence of general education.

7. The examination may be taken at any time after lodging the certificate of completion of training (as defined in paragraph 2), upon (*a*) payment of a further fee of 5 guineas; (*b*) the production of the certificates of attendance upon the prescribed courses of lectures (paragraphs 4 and 5).

8. The examination shall be held twice annually, and shall be (*a*) by written papers; (*b*) in practical work; (*c*) *viva voce*.

There shall be a written paper in each of the following subjects: (*a*) The principles and practice of nursing; (*b*) elementary medicine and surgery; (*c*) elementary anatomy and physiology; (*d*) elementary obstetrics and gynaecology, the care of infancy and childhood, and elementary hygiene.

It will be seen that the course of study and of training is thorough. It is based upon what has for some time been done at the training school of the Leeds General Infirmary. For some time in all probability the Diploma in Nursing will be confined to candidates trained at the Leeds Infirmary. There is, however, no intention or desire so to limit the field of training; great care will be exercised before any hospital is recognized as fulfilling the conditions required by the university as to teaching indicated in Regulation No. 2. It will be seen also that the character and extent of the teaching must be of a high standard and fully adequate. In the case of those candidates who are trained at hospitals other than the General Infirmary, special courses of instruction must be taken in the University of Leeds during a period of three months. For this purpose lectures delivered at the infirmary are to be regarded as being delivered at the university, as, of course, prevails in the case of medical students.

It is contemplated that the Diploma in Nursing shall be of the nature of an honours certificate and the present general training certificate will be regarded as representing the pass standard. The institution of a Diploma in Nursing is regarded as a very important step in that recognition of the science and art of nursing as an honourable profession and as a gentle calling which is held by the medical profession and by many of the general public. The effect of the granting of the diploma will be watched with sympathetic interest by those concerned with the training of nurses, and it is thought probable that other universities will follow the example of Leeds.

Hospital Developments in Bath.

The difficulty in maintaining voluntary hospitals has been experienced by Bath in common with the rest of the United Kingdom. The Committee of Management of the Royal United Hospital considers that the time has now arrived when, if its work is to be carried on, the finances of the institution must be placed on a different basis altogether. They have decided that not only must measures be taken to secure that small weekly charges shall be paid by the existing class of patients when their means permit, but that provision must be made for the hospital to provide for the accommodation and treatment of paying patients on such lines that the profits realized thereby may meet the cost of free treatment for the necessitous poor. As was mentioned in these columns last November, it is proposed to acquire the site at Combe Park, some twenty acres in extent, formerly occupied by the Bath War Hospital, now by the Ministry of Pensions Hospital. It is situated within easy reach of the centre of the city by tram, and is admirably suited for the purposes of a complete modern hospital centre. Here it is intended, as soon as funds have been obtained, to build and establish—

1. A paying hospital containing 72 beds, for people of moderate means, where patients can be comfortably accommodated at moderate charges in private rooms and small wards, and where they can be attended by their own doctors.

2. An open-air children's hospital of 48 beds for cripples and surgical tuberculosis.

3. A maternity home containing 40 beds. Part of this building will be for the use of poorer patients under the aegis of the municipality; the remainder will consist of private rooms for patients who can afford to pay for their treatment. This portion of the scheme has been postponed for the present.

Eventually it is intended to transfer the Royal United Hospital to the new site, when the city and neighbourhood will be provided with a complete modern general hospital with all the special departments, such as children's, orthopaedic, and throat and ear and nose wards. For nearly one hundred years the Royal United has been the hospital centre for the city of Bath, and for large districts in Somerset, Wilts, and Gloucester surrounding it. The population of the area supplied by the hospital is over 250,000. Every year 1,500 in-patients and 7,000 out-patients are treated. The closing of such an institution would be a catastrophe to the neighbourhood; and it is maintained that the only alternative to the scheme of extension is a hospital maintained by the rates. It is pointed out that those who advocate rate-supported hospitals fail to realize the enormously increased cost to the community which will inevitably result. It is common knowledge that institutions supported by the State or the municipality cannot compare in economy with those managed by a voluntary committee; furthermore, the free services of the medical staff would be lost, as in a rate-supported hospital doctors would naturally require substantial salaries for their work. The present scheme, on the other hand, if once launched and under way, bids fair to solve the problem of hospital maintenance by making the institution self-supporting. Its aims and methods should appeal specially to that large class of people who, owing to the redistribution of wealth, now find themselves in the position of being neither poor enough to make use of existing hospital charities, nor rich enough to incur the expense involved in the thorough investigation and treatment in private of serious or prolonged illness. The prosperous working man, the clerk, the small tradesman or farmer, the professional man, the poorer gentry, will, it is hoped, find their wants provided for in this extension scheme. A general meeting of the medical profession of the city unanimously approved of the scheme, and at a largely attended public meeting, presided over by the mayor, in July, 1920, resolutions in favour of its adoption were carried without a dissentient. A second large meeting, held on Armistice Day, 1920, was addressed by Sir Wilmot Herringham, K.C.M.G.

A fête organized by the Bath and District branch of the British Red Cross Society was held on June 30th, July 1st and 2nd last, and proved a huge success. It is estimated that the funds in hand now are nearly sufficient to build and equip the paying hospital and the children's hospital.

Scotland.

Edinburgh Royal Maternity and Simpson Memorial Hospital.

The annual meeting of the Edinburgh Royal Maternity Hospital was held on June 28th, in the City Chambers. Bailie Hutchison presided in place of Lord Provost Chesser, whose death two days later has thrown a gloom over the city. The Chairman moved the adoption of the report, and emphasized the necessity for the provision of a larger hospital to meet the obstetric needs of Greater Edinburgh. Professor James Ritchie and others took part in the proceedings. The report showed that during 1920 nearly three thousand births had taken place under the care of the medical and nursing staff of the hospital, 1,412 in the hospital itself, 835 in the outdoor department, and 699 in connexion with the Leith branch. The total number of deliveries, 2,946, was 684 more than had been dealt with in 1919. But this did not represent all the

activities of the hospital, for 802 new cases had attended the antenatal clinics, and there had been 1,209 revisits, as compared with 701 new cases, and 711 revisits in 1919. Further, the clinics and the wards for the treatment of patients suffering from the venereal diseases in association with pregnancy, labour, and the puerperium had been in use during the year—these were in an annexe of the hospital—and 113 new cases visited the clinics (with 520 revisits), whilst about 100 infected mothers were delivered in the wards.

Medical Practitioner and Panel Patient.

A complaint was made to a Medical Service Subcommittee in Scotland by a panel patient that his panel doctor on being called to visit him professionally had used abusive language to members of the patient's household. The medical practitioner concerned admitted that in the course of his visit, finding that the patient had become unwell about 6 a.m., and having been called to visit him only in the evening of the same day, he "reprimanded" the patient for the delay which had occurred, but stated that he did not use any abusive or violent language. The Medical Service Subcommittee, the Insurance Committee, and, on appeal, the Scottish Board of Health (acting by two nominated Commissioners) successively dealt with and decided the question against the medical practitioner, who, however, contended that the bodies mentioned had all acted *ultra vires* in considering the complaint, basing his contention on the argument that the conduct complained of did not fall within the definition of "treatment," which was defined in the Regulations as meaning "medical attendance and treatment." Lord Ashmore, who heard the case in the Outer House of the Court of Session, held that jurisdiction was competently exercised by the various defendants and dismissed the case. The medical practitioner appealed to the Second Division of the Court of Session, but the Division adhered to the judgement of the court below.

Ireland.

DUBLIN MILK.

THE Local Government Board for Ireland has issued a report on a bacteriological examination of Dublin's milk supply, by Dr. Joseph W. Bigger. The results obtained are compared with those of other workers elsewhere. It details the dangers of contaminated milk, points out how such contamination is caused, indicates the preventive measures which should be taken, and discusses the way in which a pure milk supply can be obtained. There are two appendices, one dealing with the results of the examination of 100 Dublin milks, and the other with the methods of examination used. This report is of more value as a general consideration of the pure milk supply question than from a purely technical standpoint. Dr. Bigger hits hard—in one place he likens the abstracter of fat and the diluter with water to a thief stealing little babies' food, but he who through carelessness and prejudice introduces poisonous dirt into milk, to an actual or potential murderer. He emphasizes the fact that all concerned with milk have a grave responsibility, and he does not forget the housewife, often a very careless person about milk. There is apparently no grading of milk in Dublin, a measure found useful elsewhere. The commercial side is well discussed, and the work of the Reading workers is referred to in this connexion. The report is one that health authorities, laymen as well as medical men, will find of value in bringing home the gravity of the pure milk question to all and sundry. It proves that it is possible, without commercial loss or very high prices, to save children and others from the horrors, until recently hardly realized by the public, of grossly contaminated milk.

THE Bloomingdale Hospital, N.Y., one of the oldest institutions for nervous and mental diseases in the United States, recently celebrated its one-hundredth anniversary.

EIGHT HUNDRED medical men were present at a dinner of American Jewish physicians in New York, and 250,000 dollars were subscribed towards the 1,000,000 dollars fund which the Zionists are raising to establish a medical university in Jerusalem.

Correspondence.

BIRTH CONTROL.

SIR,—In your issue of July 2nd, p. 11, there is a report of a meeting of the London Association of the Medical Women's Federation, at which we discussed the important matter of birth control. We recognize that the question is one of national importance, and that medical women must be prepared both to advise wisely and to justify their advice.

Now, on the surface of things it would seem as if a knowledge of how to prevent the too rapid increase of a family would be a boon to over-prolific and heavily burdened mothers. There are, however, certain reasons which probably convert the supposed advantage into a very real disadvantage. An experience of well over forty years convinces me that the artificial limitation of the family causes damage to a woman's nervous system. The damage done is likely to show itself in inability to conceive when the restriction voluntarily used is abandoned because the couple desire offspring.

I have for many years asked women who came to me desiring children whether they have ever practised prevention, and they very frequently tell me that they did so during the early days of their married life because they thought that their means were not adequate to the support of a family. Subsequently they found that conception, thwarted at the time that desire was present, fails to occur when it becomes convenient. In such cases, even although examination of the pelvic organs shows nothing abnormal, all one's endeavours to secure conception frequently go unrewarded. Sometimes such a woman is not only sterile but nervous and in generally poor health, but the more common occurrence is that she remains fairly well until the time of the change of life, when she frequently suffers more, on the nervous side, than does the woman who has lived a natural married life.

Another argument against the artificial limitation of families lies in the fact that frequently it is not in the real interest of the wife, since by removing all fear of consequences from the mind of the husband it removes the only potent check on his desires, and thus, in many instances, it removes the wife's best protection against the slavery of too frequent intercourse.

On the moral side the case against "preventives" is strong. The knowledge of the means of artificial prevention of conception cannot be bestowed on some women and withheld from others. The methods of application and the specious arguments in favour of their use will become known to all women and girls. This is a moral wrong. We may believe in purity of intention, and we must hope that there are many women whose virtue is founded on nobility of character, on a strong moral sense, and on religious convictions, but we know quite well that a certain percentage of women and girls, even amongst the unmarried, need the support of what may be called an "outside conscience." Such individuals are more likely to fall into immorality if they know that they can indulge youthful passions without any fear of disagreeable consequences. Some people who advocate the use of artificial preventives of conception go so far as to consider this knowledge an unmixed benefit to unmarried girls and women; indeed, one well-known non-medical advocate of artificial prevention stated a few days ago that a young unmarried woman attending her clinic had already procured abortion twice, but she was thankful to have been able to teach her how to avoid that necessity in future!

Further, the knowledge that sexual intercourse may be enjoyed without the probability of pregnancy occurring tends to over-develop the sexual side of character in both men and women. Mankind is already over-sexed: the absence of all restraints, such as times and seasons impose on other animals, is probably the result of the over-exercise of this gracious gift, and anything which tends still further to increase the already superabundant sexuality of man is an injury and not an advantage, both physically and morally. Can one imagine a more terrible state of society than that which is bound to evolve from the indulgence of unbridled sexual passions? The people and the nations which practise artificial prevention of conception, and who therefore have no restraint on their sexual passions, are likely to become effeminate and

degenerate. The removal of the sanction of matrimony, and the unhindered and unbalanced sexual indulgence that would follow, would war against self-control, chivalry and self-respect.

London, W., July 1st. MARY SCHARLIEB.

SOME MEDICAL IMPRESSIONS OF THE MINERS' STRIKE.

SIR,—As a practitioner of some twenty years' experience in one of the largest mining areas in South Wales, it occurs to me that the record of certain factors of a beneficent nature—which are making for the health of the mining community and have forced themselves upon my notice during the past two months—may be of some interest.

The general practitioner's work here, at the moment, is at a minimum, and vividly recalls my experience in a neighbouring area in 1908 when the South Wales miners were out on strike for six months. Prior to that strike my average domiciliary visits numbered twenty-five daily; but, during the out-of-work period, it became quite unusual to be called upon to visit more than one patient a day. Most of one's time was taken up in assisting to dole out provisions to the hungry and needy during the mornings, while the rest of the day was spent at football, cricket, etc., in the nearest available fields with scratch teams of miners. Medical work at that time almost registered zero. To-day, similar features are characteristic. Life in the open air, combined with indulgence in healthy sport under excellent weather conditions, have considerably improved the miner's health and increased his resistance to disease. I have spoken to many and medically examined others, particularly those who, during the hard strain of war-time work, were suffering from bronchial catarrh, anaemia and fatigue, and it is simply astonishing to find how greatly the general health of these men has improved.

About seven weeks or so ago we were threatened with an influenza epidemic of the catarrhal (head) type. It was remarkable how quickly the men recovered after three days in bed, thanks chiefly to the glorious sunshine which poured into their bedrooms and to the fresh spring air which was allowed free entrance through the widely opened windows.

Many young men whom I have known from childhood, and who have only as recently as ten to fifteen years ago become colliers, had long since lost their colour and become sallow and pasty looking; but during these last weeks they have regained their colour to such a degree that they have completely lost their "hall-mark" appearance of colliers.

A specific instance of the beneficent effects of occasional respite from labour and of pure air and sunshine came under my notice at the beginning of the present strike. It was the case of a young father of three children. He had developed a very bad bronchial cold, which gave all the signs and symptoms of early phthisis in the apex of his right lung. His general condition was very poor, his sleep much disturbed by a harassing cough, and he also had a bad family history. The prognosis was not at all satisfactory, but the enforced rest from work, good feeding, and open-air treatment worked wonders. To-day he is rid of his cough, sleeps and eats well, and only goes indoors for meals and sleep. He has gained 2 lb. in weight each week during the last three weeks, and has taken no medicine for a month.

This case is typical of so many I have met with these last two months that I am led to ask the following questions:

1. Does the working miner get as much sunshine and fresh air as he needs?
2. Does he get the necessary rest from work and sufficient opportunity for healthy recreation?
3. Do not these factors bear directly upon restriction of output difficulty?
4. Would it not be economically and even morally profitable to give the collier fourteen days' rest from work, with full pay, after every three months' period of full-time work?

I am convinced that if the necessary changes suggested by these considerations were adopted, losses of time due to illness and accident, the inconveniences caused by the "ca' canny" policy, and the inevitable fatigue due to working in the vitiated atmosphere and the excessive heat of the coal mine would soon become experiences of the past.

There has been of late a revival of interest in this country in industrial diseases and hygiene, thanks chiefly to the splendid work inaugurated by Sir Thomas Oliver and also to the services of American pioneers such as Edsall, Mock, Linenthal, and others, as well as to the establishment of industrial and social service clinics at several large hospitals in the United States. In these and other ways much progress has been made in our knowledge of the etiology of many industrial diseases, and attention has been drawn to the importance of proper rest, recreation, feeding, and clothing for those engaged in such industries. All this has redounded to the mutual advantage of both the employer and the employee. Special clinics of this kind, however, should be merely supplementary to the teaching curriculum of a medical school. Experience has amply proved that these clinics (as well as maternity and school children clinics) can be conducted more effectively by the general practitioner in his own consulting-room; indeed, very little real progress will be secured in the health of the community until that plan is adopted. The strongest objection to the Dawson scheme lies in the fact that, while it is based on the excellent army organization of medicine during the war, the civilian population will never consent to be "pigeon-holed" wholly and solely as "pathological specimens" for the object of securing statistics and issuing pamphlets from Government departments. Dr. Linenthal, head of the Industrial Clinic of Massachusetts Hospital, U.S.A., maintains that "industrial medicine in its wider meaning is a field primarily not for the industrial physician but for the physician in the general practice of medicine who must recognize that states of ill health are in many instances due to the hazards of industry."

The miner's wife should not be forgotten in this survey. Her daily work invariably commences before the husband is awake. She is the last of the household to retire to rest at night; for most colliers' wives are in normal times (as they put it) "on their feet" from fifteen to eighteen hours each day. Not the least welcome feature of these strike days is the fact that these overwrought wives and mothers are now able to secure at least four hours' additional rest.

Further, the question of diet is of vital importance to the collier, and it provides an opportunity to the general practitioner in mining areas for the instruction of heads of households in suitable dietary for the periods of rest as well as those of work. And these people are, as a rule, very grateful for advice in this matter.

As a last suggestion, could there not be established in every large colliery area or group of collieries a miners' welfare committee, composed, say, of a dozen medical men experienced in colliery practice, half the committee appointed by the owners and the other half by the Miners' Federation, and presided over where possible by a medical expert in industrial diseases and hygiene? This committee could easily collect statistics and collate the facts incidental to the medical hazards of mining as well as those pertaining to the personal hygiene of the miner, with a view to making recommendations and distributing the same in the form of simply worded instructions to each miner. If one-half the energy expended during the war by the Medical Research Committee and the like to keep the soldier fit and well could now be devoted to improving the physical (and consequently the moral) well-being of men engaged in uncongenial industries, we should make much progress in the direction of increasing the efficiency and output in these industries.—I am, etc.,

July 6th. GENERAL PRACTITIONER.

CLINICAL AND LABORATORY METHODS.

SIR,—Dr. Thursfield's letter reveals that he and I have different conceptions of what is meant by prognosis and the early signs of disease. The reason that clinical observations have fallen into disrepute is because the advance of science has shown the need for clear and precise descriptions, and the backward state of clinical medicine is in a great measure due to the lack of precision in observations. That was the reason why I described in detail the steps I took to understand the meaning and significance of the individual symptoms. The symptoms of which a patient complained have not yet been clearly differentiated to enable us to investigate the early stages of disease. Speaking recently to a distinguished authority on consumption, I pointed out the absence of a knowledge

of the early stages of this disease. He agreed, and said that consumption began with a feeling of malaise. When asked how he defined malaise—was it a symptom or a condition made up of a number of symptoms?—he confessed that he had not looked at it from that point of view. At St. Andrews we have gone so far as to recognize that there are different kinds of malaise, suggesting that the different forms are caused by different agents. We are applying the same principles of investigation to pain, cough, etc., and we see the necessity of differentiating these different kinds very clearly.

It was to show the need and importance of the preliminary study of symptoms that I referred in my lecture to heart irregularities. Everyone who is familiar with the subject recognizes the enormous advance that has been made in our knowledge of the different forms of irregular heart action. I wished to impress on my hearers how equally important it was to find out their prognostic significance, a subject which had received scant attention, and which could not be clearly understood until the irregularities were differentiated. I have repeatedly tried to impress this on the medical mind, but with little success. A few years ago, in a correspondence in a medical journal, I called attention to the great advances that have been made in our knowledge of irregular heart action, not only in the differentiation, but also in the prognostic significance of each irregularity. A distinguished physician, attached to a large teaching school in London, wrote that "we knew as much about irregular heart action thirty years ago as we did to-day." What he really meant was that *he* knew as much about irregular heart action to-day as he did thirty years ago. My remarks on prognosis were not only to indicate its importance, but to show that before an intelligent inquiry into the subject could be made a preliminary knowledge of the mechanism of the symptoms on which a prognosis was to be based had first to be acquired. Then the functional efficiency of the organ which gave rise to the symptoms had also to be known. I illustrated this by pointing out that in heart affections it was necessary to know the symptoms of heart failure; that I had been studying the subject for over thirty years, and yet was far from fully comprehending the matter, and that in consequence I was not in a position to give a prognosis in a great many instances.

The attempts made at St. Andrews to get a clear insight into the nature and significance of symptoms has revealed that in the production of symptoms, as in the production of all other phenomena in nature, there is a definite law, and we are endeavouring to discover this law, and have made considerable progress in this direction, and it is even possible that we have already discovered it.

If we prove to be successful the effect upon medicine will be far-reaching, but it will require much labour and patient inquiry before we know how to use the discovery, and it will be a long time before it becomes recognized, particularly as it will mean the giving up of many beliefs on which the teaching of medicine has been based.—I am, etc.,

New Park, St. Andrews, Fife, July 5th. J. MACKENZIE.

P.S.—In the JOURNAL which has just come to hand (July 9th) there is an excellent example of a lack of comprehension of the meaning of symptoms in Lord Dawson's oration on colitis. There are a great many symptoms mentioned, but they are described with no ordered arrangement, and with no reference to their mechanism or their relation to the supposed disease. As an example: "Pains may be acute or paroxysmal, or dull and aching, or, again, there may be a constant sense of abdominal discomfort and misery. Tenderness may be local, general, or absent." Where were the pains felt and what was tender? Simple matters, it is true, but absolutely essential to the proper understanding of the diseased state.

I am not in this matter criticizing Lord Dawson personally. He is a man of experience and a recognized authority on colitis, and a distinguished exponent of medicine as it exists to-day. His oration is typical of the attitude of the modern physician towards disease, an attitude which gives a misleading representation of disease as it is manifested in the human body. Why it misleads can be seen if the mechanism by which symptoms are produced is understood. When a person falls ill, every organ of the body may be disturbed, so that a large number of symptoms are produced from this cause. Moreover, the disturbance of one organ reacts on and interferes with the functions of other organs. From these two sources an illimitable number of symptoms are produced. In place of recognizing this fact, and searching for the principles that should guide to an intelligent understanding of symptoms, the physician seizes upon one or more symptoms and calls that the disease. He then collects a number of the other symptoms, as if they were part of the supposed disease.

Dr. Thursfield may be interested to see what Lord Dawson has to say about the prognosis and early stages of a disease to which he has given so much attention. He will probably find it an example of the fact that *specialists rarely have any knowledge of the early stages of those diseases in which they specialize.* J. M.

CHRONIC NASOPHARYNGEAL INFECTION IN CHILDREN.

SIR,—In your issue of July 2nd Dr. Lapage ascribes various conditions to nasopharyngeal infection occurring in children. It does not, however, appear that he has adduced sufficient proof. In my experience nasopharyngeal trouble in children is commonly due to adenoids, and usually disappears after their removal. Dr. Lapage is no doubt aware that the pharyngeal tonsil may give rise to various symptoms without being sufficiently enlarged to cause very definite obstruction. For these reasons it is imperative that, if we are to accept his hypothesis, we should be furnished with many more data. Perhaps your space will be best economized by asking a few questions:

1. Does he mean some form of nasopharyngeal affection apart from adenoids?
2. How did he take his swabs so as to avoid contamination either from the mouth or nasal orifice?
3. Have his cases been examined by a rhinologist?
4. If so, how is the condition diagnosed?
5. What evidence has he as to the connexion between the nasopharynx and other symptoms?

It is desirable that these points should be cleared up. If the cases were merely instances of adenoids which were not large enough to cause obstruction, and if they were sources of toxaemia, the proper treatment would have been operative. Physical exercises are certainly beneficial in mild cases, but surely if the pharyngeal tonsil is causing systemic poisoning, more energetic measures are called for. Most cases of adenoids are, however, not benefited by sea air—rather the reverse.—I am, etc.,

Harrogate, July 4th. P. MCBRIDE.

SURGICAL TREATMENT OF ANGINA PECTORIS.

SIR,—I have read with great interest the article in the JOURNAL of June 4th, 1921, on "The Surgical Treatment of Angina Pectoris," and submit the following comments on the points suggested by it.

Jonnesco's operation, reported in the JOURNAL in 1920, appeared to have as its object the prevention of the most dangerous symptom associated with angina pectoris—namely, vagal stimulation resulting in cardiac inhibition—rather than treatment of angina pectoris itself. As such it appeared to have met with success (I am trusting to memory, as my notes are not at hand for reference), and I do not remember the mention of any other of the more frequent symptoms of angina pectoris in that connexion.

In Rénon's case of aortic aneurysm operated on by Tuffier with the object of relieving pains caused by the aneurysm, there were symptoms suggesting what Mr. Walter Verdon speaks of as "segmental neurosis," due to the aneurysm and its attendant mediastinitis. Those symptoms were apparently unrelieved by the very courageous and original operation, for the patient was subsequently treated for "a sensation of intrathoracic cramp," "pains in the back and neck," and "violent pains in the thorax." There was no attempt, as by Jonnesco, to divide the fibres through the cervical sympathetic ganglia to the vagus, and her myocardium appears to have been sufficiently healthy to withstand any inhibitory vagal attacks (which are not referred to), as she lived for about six years and died from quite other causes.

Jonnesco's operation was designed to protect the patient from a vagal attack on the heart, and as such was

successful. Tuffier's operation, I take it, could hardly be expected to result in much benefit to the anginous symptoms.

Sir Clifford Allbutt draws attention to the connexion between disease of the aorta and angina pectoris, and in his work on *Diseases of the Arteries* expressed his belief that some form of aortitis is the cause of most cases of angina pectoris.

Mr. Walter Verdon shows that irritation of the sympathetic nerve plexus in the subserous tissue of pericardium or pleura (in Rénon's case it is stated that there was "considerable mediastinitis") sets up a segmental neurosis in the thoracic region, or, as he puts it, "the anginous habit," a condition precedent to anginous seizures. As, notwithstanding the operation, the aneurysm remained, with all its attendant mediastinitis, the nerve irritation causing the segmental neurosis would also persist, with its attendant anginous symptoms. It appears, therefore, that whilst we could not expect Tuffier's most interesting operation to have any effect on the symptoms of angina pectoris, the after-history of the case supports the teaching of Mr. Walter Verdon.—I am, etc.,

Tunbridge Wells, June 27th. E. A. STARLING, M.B.

HEART-BLOCK.

SIR,—"Case," according to the dictionary, means a person under medical treatment, but it does not follow because the case died that there is any reflection on Dr. Wardrop Griffith's treatment.

Dr. Griffith admits that his receiver might with advantage be smaller, yet he does not seem to have made any effort to seize that advantage, nor does it appear to be of any use theorizing over results he has not obtained. As a result of my experiments with different sized receivers I have come to the conclusion that one must not be too dogmatic on the subject, for whilst there may be one or two points common to all the tracings, the differences also may be of instructive value. Is it possible that some of these differences depend on varying conditions of the normally negative intrapericardial pressure, or do they indicate any change in either the quantity or quality of the pericardial fluid?

In many cases I have been led to think that some toxic condition had produced such changes, and by directing treatment to this toxicity have conferred some benefit on the patients. Having obtained satisfactory results by acting on such a theory, one is justified in asking whether by using different sized receivers the results may be considered evidence of pericardial changes which cannot be obtained by using a 1½ in. receiver only.

A negative intrapericardial pressure being present in all healthy persons, it follows (does it not?) that when the ventricle is contracted there is more space in the pericardium and the negative pressure more marked, whereas when the ventricle is distended the pericardium is most taut. Am I not correct in stating that all pressure exerted by the heart must be by means of or through the pericardial fluid, a remark that applies also to the heart sounds? In pericardial effusion both the waves and sounds tend to get less and less.—I am, etc.,

Swansea, June 26th. G. ARBOUR STEPHENS.

CAPILLARY PRESSURE.

SIR,—Drs. Hill and McQueen (June 25th, p. 954 et seq.) attempt to answer my letter (June 11th, p. 873) by representing me as holding that the tension in the wall of a capillary blood vessel is produced in the same way as that in the wall of a soap bubble. I made no such statement.

I gave two illustrations of tension in curved surfaces —namely, a hose-pipe and a soap bubble. It did not occur to me that I ought to explain that in the case of a capillary blood vessel the tension in the wall is produced similarly to that in the wall of the hose-pipe; not to that in the wall of the soap bubble. I should have considered such an explanation an insult to the intelligence of your readers. But apparently, for the benefit of Drs. Hill and McQueen, I should have explained that the tension in the walls of the capillaries is produced through their being distended by having blood forced through them.

When a hose-pipe is working, the pressure at any point on its inner surface is greater than that at the immediately opposite point on the outside, the difference between the two being balanced through the tension in the wall of the pipe, according to the equation,

$$p_1 - p_2 = \frac{T}{R}.$$

The same principle holds good with blood vessels when blood is forced through them. Dr. Hill really admits this when he says (June 25th, par. 5)—

"An artery, big or small, when compressed by a surrounding fluid pressure, is shut up by a compressive force equal to that of the pressure which is maintaining the flow through the artery, and which is measured directly by a manometer connected with the lumen of the artery. The same holds good for a vein, big or small."

We may take it that the same holds good for capillaries. In his lecture, however, Dr. Hill assumed that the pressure in the cerebral arterioles, capillaries, and venules was no greater than that of the cerebro-spinal fluid. If that were so, then, according to his own statement quoted above, the pressure outside these blood vessels being equal to that inside them, they would be shut up and no blood could pass through. What amazes me is that Dr. Hill should fail to see this himself.

But Dr. McQueen reaches a point of still greater absurdity, for he imagines he has proved that the pressure at a point in a capillary through which blood is being forced is less than the pressure at the point immediately opposite on the outside of the capillary. That his argument led him to such a conclusion should have been sufficient to show him that there was something wrong with it. Not only is this conclusion at variance with the first half of paragraph 5 of Dr. Hill's letter which I have quoted above, but with the principle laid down for arterial blood pressure in the second last paragraph of his own letter, which principle is equally applicable to capillary pressure.

I do not pretend to know the correct numerical values of the quantities represented in the equation given above as applied to capillaries. These, no doubt, vary greatly under varying conditions. In the human body in the upright position, the value of p_1 would be very different in the sole of a foot from what it would be in the crown of the head.

The values I inserted were only intended to show that a very small tension in a capillary wall, 0.34 mg. per centimetre of length, could sustain a difference of pressure between inside and outside equal to a manometric pressure of 50 mm. of mercury. This important consideration was not taken into account by Dr. Hill in his lecture, not only when he took the pressure of the cerebro-spinal fluid as a measure of the pressure in the cerebral arterioles, capillaries, and venules; but also when he stated (Lecture, paragraph 5) that the pressure in the aqueous balances the capillary pressure in the iris. I repeat that he might as well say that the pressure of the atmosphere in the garden balances the pressure of the water in the garden hose-pipe.—I am, etc.

Knock, Belfast, June 25th. JOHN R. GILLESPIE.

TREATMENT OF ACUTE TOXAEMIA.

SIR,—The essential points which Sir Bryan Donkin enjoins in a trial of Sir Archdall Reid's treatment for acute toxaemia (BRITISH MEDICAL JOURNAL, June 25th) seemingly imply a doubt, which others will share, respecting the specific method of its action.

The examination of the sweat, the importance of which is emphasized by italics, will offer both difficulty and sources of error, nor will a negative finding prove much for or against a theory of elimination of the toxins through the channels of the skin, which is as fascinating as it is simple. Though not impossible, it is improbable that the toxins become fractionally distilled from the body fluids and appear on the surface unaltered. Sweating is common to healthy and diseased states, and a supposition reasonable to hold in the light of our present knowledge is that it is a parallelism and an outward and visible sign rather than a direct cause of betterment in the patient's condition. It not improbably corresponds to a revolutionary change in protein metabolism, and may be considered a part of the process of adjustment to altered biochemical states, analogous also in some way to tears in emotion.

It is impossible to escape from a conviction that there is some unity of process of adjustment underlying all life, and that all cures come from within. From my angle of view of medicine—broadly philosophic, often not capable of proof, and never of dogmatism, but agreeable to recorded experience—there is in our organism so long as it continues to live, in addition to the disturbances which we have inherited or acquired through our ignorance, faults or follies, a mass of old and new constructive influences which insistently work toward the restitution of the former condition of normal.

The exhibition of specific drugs and vaccines does not always lead to a direct attack on the supposed causal organism, but by throwing the whole protein mechanism out of gear, a molecular shuffle or dance is produced, and in this unstable phase a postulated life force mobilizes the reserves or antibodies, which destroy the toxins and restore law and order again in the body.

This is by no means in conflict with Sir Archdall Reid's recommended treatment, but it is intended to present another possible aspect of its manner of working, not out of tune with modern conceptions in science.—I am, etc.,

Southampton. June 25th. ARTHUR KING.

TUBERCULOUS PUS.

SIR,—It is frequently stated and generally believed that the tubercle bacillus alone does not cause pus, although at any hospital, on almost any day, thick pus can be seen from a recently opened, or aspirated, purely tuberculous abscess.

I heard a surgeon one Monday say in his lecture, "The tubercle bacillus never gives rise to pus. Clear fluid and broken-down débris, but never pus." On Tuesday I heard the same surgeon, about to open a psoas abscess, say, "My first step will be to let out the pus"; then later, "Receiver ready for the pus," and again, "Take the pus away."

Such contradictions confuse the student. Moreover the dictum that the tubercle bacillus does not cause pus has been transferred to the consideration of pulmonary tuberculosis, so that it is often stated that when pus occurs in connexion with this disease there must be also a secondary infection. Yet this by no means follows, and in an autopsy on a case of phthisis there are usually to be seen cold abscesses of the lung which have not yet burst into a bronchus, as well as the cavities of others which have already discharged.

The conception of pus differs widely in the minds of different authorities, and it would be a useful innovation if a committee of pathologists and others could evolve for us some authoritative definition, just as do physiologists with regard to their own terminology.—I am, etc.,

Paignton, June 17th. E. WARD.

THE USUAL SITE OF ORIGIN OF ENDOLARYNGEAL CANCER.

SIR,—Sir StClair Thomson, in his contribution on the usual site of endolaryngeal cancer, published in the BRITISH MEDICAL JOURNAL of June 25th, claims to be the first to upset the current view and to prove the fallacy of the teaching of Virchow and Semon that malignant disease of the endolarynx is most commonly met with in the posterior third of the glottis. He refers to this important question as "a point which has not been settled and has threatened to mislead us."

I venture to suggest that he must have overlooked the investigations which I made four years ago and the definite conclusion I came to as a result of my experience, and after searching the literature of all the cases of thyro-fissure recorded since the first operation performed by Brauers of Louvain in 1833. These researches were published in the *Journal of Laryngology and Otology* in 1918, and have recently been republished in a book by the London University Press. I quote the following paragraphs from my article:

"It is generally taught that intrinsic malignant disease of the larynx is most commonly situated on the posterior third of the vocal cord, and extends posteriorly, and has a special preference for the posterior commissure; but experience during recent years has shown that the *middle or anterior third is the favourite site*, and that extension is more common along the anterior portion of the cord to the anterior commissure. This is confirmed by reference to cases reported by Semon, StClair Thomson, Tilley, Jobson Horne, Middlemass Hunt, Barclay Barron, Mollison, Chichele Nourse, Hett, Cathcart, and others."

The reports of cases demonstrated that "intrinsic cancer may be situated on the surface of the cord and be confined to only a small portion, or it may invade a whole cord or ventricular band, or a diffuse deep infiltration may be present, which may only slowly approach the surface, or else having commenced on the anterior or middle third of one vocal cord it may extend to the anterior commissure and even invade the opposite cord, or again, it may be found to have spread downwards into the subglottic space, or backwards to the posterior wall of the larynx."

That "carcinoma of the vocal cord grows chiefly in a direction parallel to the long axis of the cord, which it tends to invade completely, or to a very large extent before it encroaches on surrounding parts—this characteristic method of growth being due, according to Blumenfeld, to the arrangement of the submucous lymphatic space of the cord which forms a closed sac, the boundaries of which separate it from the ventricles of Morgagni and the lymphatic spaces of the subglottic mucosa. For these reasons, according to Knight, the prognosis of intrinsic cancer of the larynx is, perhaps, more favourable than that of malignant disease in almost any other region of the body. Again, in the intrinsic variety, the disease at first remains a local one, owing to being surrounded by a 'cartilaginous box' from which the intrinsic lymphatics have a poor connexion with the neighbouring glands in the neck."

I also found from my investigations that

"endolaryngeal cancer—subglottic in origin—was very rare; just as in the case of benign growths. Butlin only found three subglottic cases amongst fifty cases of laryngeal cancer."

I referred in my paper to these subglottic extension cases as

"the more serious, because recurrences are more apt to occur in them, and if the disease has extended into the subglottic region it is difficult to remove it from the inner surface of the cricoid plate because here the perichondrium is more firmly adherent and there is a break in the continuity of the perichondrium of the thyroid and cricoid cartilages."

Also that—

"it is especially difficult to get beyond the growth in those cases where the growth has extended in between the thyroid and cricoid cartilages, and infiltrated the muscles in this position."

The importance of Sir StClair Thomson's contribution lies in the fact that his conclusions are derived from a personal series of fifty thyro-fissures, and that they not only confirm, but prove, that the conclusions which I had already come to in 1918 were correct.—I am, etc.,

London, W., June 25th. IRWIN MOORE.

THE TREATMENT OF CUTANEOUS ANTHRAX.

SIR,—Mr. Ogilvie and Mr. Hall, in your issue of June 18th, conclude an interesting article with an expression of the opinion that in cutaneous anthrax the combination of excision and serum treatment is the most rational and the safest course.

In the BRITISH MEDICAL JOURNAL of November 1st, 1919, p. 559, I published a summary of the treatment of 75 cases of cutaneous anthrax in the Kashmir Mission Hospital. I am inclined to think that in many cases treatment by actual cautery is preferable to excision. The limits of peripheral infection are often by no means sharply defined. And on general principles the risk of systemic infection is likely to be increased by cutting through any area where phagocytosis is active, as local resistance may thereby be impaired and fresh planes of tissue opened up to extension of the disease. I have been in the habit of applying a button cautery to the centre of each infected area. This appears to increase the local reaction and the peripheral resistance while destroying the more heavily infected centre.

I agree with the authors' criticisms of the value of statistics and with their recommendation that serum should also be used.—I am, etc.,

Bromley, Kent, June 22nd. ERNEST F. NEVE.

NATIONAL PROVIDENT SCHEME FOR HOSPITAL AND ADDITIONAL MEDICAL SERVICES.

SIR,—The letter last week of Dr. Caplan is important and deserves a reply.

1. *Statistics.*—He fails to realize that the scheme is primarily intended to overcome the present and future serious financial position of the 113 voluntary hospitals in Greater London. If 1,200,000 (not 5,000,000) persons join as "units" the scheme will be a success, in that it will cover the total deficit of these hospitals in 1920. If more than that number subscribe, it will be more than a success. The "minute percentage" of the population requiring

in-patient hospital maintenance and treatment (not merely "specialist advice") is 2 per cent. This cost nearly £3,000,000 in London in 1920.

2. *Facilities Offered to the Patient.*—He fails to realize that the whole of the facilities are to be obtained solely through the general practitioner. If the medical attendant of a patient does not consider his client should have the facilities he can refrain from obtaining them for the sufferer.

3. *Consultations at the Homes of the Patients.*—I presume that Dr. Caplan would admit that consultations upon patients who are unable to leave their beds have their advantages to both patient and practitioner. If so, then it is best to estimate for the maximum rather than the minimum of such consultations. It is hoped that by such consultations the contact of the general practitioner and the member of the hospital staff will be increased and their co-operation greatly extended, to the advantage of all.

4. *Facilities for the General Practitioner.*—I am at one with Dr. Caplan in his desire that the general practitioner should have greater opportunities for treating his patients, even serious cases, but I am sure that he will admit that many such cases are better treated away from their own homes. It is in this scheme, if successful, that money will be available for those extra beds in cottage hospitals ("primary centres") and infirmaries where, in the future, the general practitioner will be able to treat his cases. I can assure him that his gibe at the consultant being the cause of the want of progress of the general practitioner is not the opinion of his brother practitioners in London. Further, by this scheme, if it has only a minimum success, there will be money—£30,000 a year—which could be used for post-graduate teaching in London.

5. *Medical and Nursing Education.*—Lastly, the fact that clinical material is needed for the education of the medical student and the nurse seems to have been overlooked by Dr. Caplan. It is the twelve London hospitals with medical schools which have chiefly felt the financial strain, and Lord Cave's committee thinks that in some such scheme as this lies the solution of the problem of their financial support.—I am, etc.,

London, W., July 11th. W. MCADAM ECCLES.

WHAT IS SCIENCE?

SIR,—Dr. Charles Singer's letter suggests a test to be applied to discriminate what branches of human knowledge may be included under the term of "Science," and the test to be applied is that "Science is knowledge in the making."

As an illustration of the application of this test Dr. Singer takes the subject of descriptive anatomy, and he finds that it is "hardly any longer knowledge in the making"—assuming apparently that our knowledge of the anatomy of the human body is now complete and perfect. Such an assumption is, however, very far from justified. As an example of an opinion on this matter at total variance with Dr. Singer's may I quote the deliberate and well chosen words of one who is not himself an anatomist, but who from his work has been brought into intimate contact with the work of anatomists, and has sought in human anatomy for that complete and perfect knowledge of the human body which Dr. Singer believes to exist? He states:

> "Even to this day, with all the excellent work which has been accomplished, there is, it is safe to say, not yet a single bone in the body, and no other organ, the knowledge of which and of its total range of variation is perfect, and that even in the white race, which has been most studied. The splendid anatomical textbooks of the present time give little more than generalities, and are marked by many omissions and imperfections. In special treatises and periodicals the literature is much richer, but in the matter of details there are innumerable lacunae. Yet details are the essentials of all knowledge. . . ." (*Physical Anthropology*, Ales Hrdlicka, 1919.)

—I am, etc.,

Bute Medical School, The University, St. Andrews, July 2nd. DAVID WATERSTON.

REMOVAL OF STONES FROM THE PELVIC PORTION OF THE URETER.

SIR,—I would like to suggest to Mr. Battle a means of approach which I prefer to any described in his article (July 2nd, 1921, p. 6). A mid-line suprapubic incision is made, the recti separated and retracted by a self-retaining retractor. The patient is then placed in the Trendelenburg position and the ureter quickly and easily exposed by stripping back the peritoneum from the lateral wall of the bladder and the iliac fossa; the operation is facilitated by previously distending the bladder. The advantages of this method are:

1. The wide exposure obtained so that the removal of the stone and suture of the ureter can be done under the eye. With the table placed near a window no artificial light is necessary.

2. The operation is extraperitoneal, an important point when the urine is infected, as it commonly is in these cases.

3. There is no damage to muscles.—I am, etc.,

London, W., July 4th. SYDNEY G. MACDONALD.

THE SITE OF OPERATION FOR EMPYEMA.

SIR,—May I thank those of your correspondents, especially Mr. Wm. Pearson (May 14th, p. 719) and Dr. T. B. Sellors (June 4th, p. 836), who replied to my inquiry about the site of operation for empyema, and at the same time urge that further trial be given to the anterior opening, for I am convinced that the results will justify the old-fashioned operation.—I am, etc.,

Bromsgrove, Worcestershire, July 5th. H. CAMERON KIDD.

PROFESSIONAL SECRECY.

SIR,—In reply to F. E. H. Daunt (July 9th, p. 61), after fifty years' experience as a registered medical practitioner, during which period it has been my lot, often unwillingly, to give evidence on oath in a number of courts, from that of the coroner to the Divorce Court, I fully appreciate unwillingness on the part of the medical attendant to divulge professional secrets.

As a justice of the peace of forty years' standing I have had genuine sympathy with my brother medicals placed in similar unenviable positions; still I am certain there is neither moral nor legal obligation or justification not to fulfil the terms of their oath—"That the evidence they shall give shall be the truth, the *whole* truth, and nothing but the truth"—in spite of any sympathy or the reverse expressed by the bench trying the case.—I am, etc.,

Folkestone, July 9th. P. BROOME GILES.

Obituary.

SIR GEORGE SAVAGE, M.D., F.R.C.P.,

Consulting Physician and Lecturer on Mental Diseases, Guy's Hospital.

THE death of George Henry Savage, which occurred at his house in Devonshire Place, London, on July 5th, removes another outstanding figure from British psychiatry. Though his name is perhaps not directly associated with any remarkable advances in our knowledge of mental disorder, he was, nevertheless, a great psychiatrist, whose name may fittingly be remembered with those of Clouston, Maudsley, and Mercier. His life was one of strenuous activity, and at an age when he might reasonably be expected to seek the rest and leisure he had so well earned, he still took an eager interest in the speciality to which he had devoted his whole professional life. Only as recently as February, 1921, he was present at the quarterly meeting of the Medico-Psychological Association to listen to Sir Frederick Mott give a summary of his researches on the pathology of dementia praecox; in May, 1920, he attended the first Maudsley lecture given by Sir James Crichton-Browne, and, in spite of his deafness, followed closely the long and closely reasoned oration, and himself contributed to the remarks which followed.

Sir George Savage was born at Brighton in 1842, but his father was a Yorkshireman and his mother of Scottish extraction. He was educated at Brighton, at the Sussex County Hospital, and Guy's Hospital, where he won the treasurer's gold medal. He took the diploma of M.R.C.S. Eng. in 1864, and the degree of M.B. in the University of London in 1865; he graduated M.D. in 1867, and took the M.R.C.P. Lond. in 1878, being elected to the Fellowship in 1885. His first appointment outside Guy's Hospital was at Bethlem Royal Hospital; he became assistant medical officer in 1872, and physician-superintendent in 1879, a

post he retained for ten years. It was during these seventeen years that his reputation as a psychiatrist became so firmly established in the estimation of the profession. He was well and widely read in the literature of the speciality to which he gave himself; he was a shrewd and careful observer, who made the best use of ample opportunities: he was endowed with much common sense, and had a genial open manner, totally free from pomposity, so that he was socially one of the most popular of men. Though in his early days at Bethlem Hospital he gave much time to the study of the history of the central nervous system, he was primarily a clinical physician. His lectures at Guy's Hospital and his teaching in the wards of Bethlem Hospital were enlivened by stories and anecdotes drawn from an immense store. With all these qualities it is not surprising that he drew large classes, and was visited by many post-graduates from British Dominions and the United States. He retired from Bethlem in 1889 to engage in consulting practice; in this he was very successful, and he was also frequently consulted by the Home Office in difficult cases. He was deeply interested in the medical education of women, and helped not only with sound advice but with money in the early days. For the last thirty years or so he had never failed to attend the opening ceremony of the London School of Medicine for Women, and was present last October.

He held a great many offices in various medical societies. In 1886 he was president of the Medico-Psychological Association, a society in which he has taken a lifelong interest, and one in which he is justly loved and honoured. His presidential address was devoted to the question of the relationship of insanity to bodily disease and to simple disorder of function. This address well repays reading at the present day, and the human interest of mental disorder which this paper reveals is characteristic of all Savage's work—an attitude towards his subject which made him the great clinical psychiatrist he was. At this time he was co-editor of the *Journal of Mental Science* with Dr. D. Hack Tuke. During their editorship a number of important papers were published in the journal, and we note with particular interest one by Hughlings Jackson on "Evolution and dissolution of the nervous system." Other offices he held were those of president of the Neurological Society, president of the Section of Psychology at the Annual Meeting of the British Medical Association at Belfast in 1884, and president of the Section of Psychiatry of the Royal Society of Medicine at the time it was first formed. This last office he held in 1912, the year in which he received the honour of knighthood. He was Lumleian lecturer at the College of Physicians of London in 1907, the subject of the course being "Insanity, its causes and increase." Two years later he was Harveian orator, and took for his subject "Experimental Psychology and Hypnotism." Savage was the author of a large number of papers, many of which were published in our own columns; all were characterized by independence of judgement and illumined by wide clinical experience. He contributed to various journals until quite recently, both American and English. His textbook, *Insanity and Allied Neuroses*, was deservedly popular with students and practitioners, and is now in its fourth edition. At one time he was examiner in mental pathology at the University of London.

Savage maintained his connexion with Bethlem Hospital, and was on the board of management of the Royal Earlswood Institution for mental defectives. In the latter institution he was keenly interested, and as honorary consulting physician he always was ready to render help and advice in cases requiring special treatment or causing anxiety.

Sir George Savage was twice married, his second wife being the daughter of the late Dr. Sutton, physician to the London Hospital. He leaves one son and one daughter. His two recreations were mountaineering and fishing; he became a member of the Alpine Club in 1878, and was its vice-president for three years. For fishing he had a river-side cottage at Hurstbourne Priors, in Hampshire. There also he was able to indulge a love of gardening.

His death leaves a gap which cannot be easily filled. He had no doubt done all the professional work of which he was capable, but his personality was a striking one, and he will be definitely missed not only by his wide circle of personal friends, but also by the larger circle of those of the same speciality at whose meetings he has been for so many years a familiar figure.

J. E. BLOMFIELD, M.D.OXON.,
Sevenoaks.

ON July 8th, after a long and trying illness, which he bore with great fortitude, Dr. J. E. Blomfield died at his home at Sevenoaks, aged 64.

Blomfield was educated at Winchester, and subsequently obtained a demyship at Magdalen College, Oxford, in natural science. Throughout his life his fundamental sympathies were with biology in all its branches, and he was an accomplished microscopist. In the early part of his career he wrote a paper on spermatogenesis, which gained the warm approval of Charles Darwin, and even in his later years he had made a large number of notes and preparations on new growths in trees. After he had taken his natural science degree, Blomfield entered on his medical course. He was elected Radcliffe travelling fellow, and worked at Jena, Vienna, and Paris; in 1886 he was resident medical officer of the Hertford British Hospital, Paris.

His medical studies were pursued at University College Hospital, where he became house-physician. Under the advice of friends Blomfield decided to spend his life in the regular routine of general practice, and from the year 1889 he was a devoted country doctor at Sevenoaks. He was a hard-working conscientious and very sound practitioner, and never spared himself in the care of his patients. He was very modest, unassuming and gentle, and never made any parade of his extensive biological knowledge; but, as his intimate friends well recognized, he was not only a keen observer but a man of philosophical bent who realized the true crux of a problem, even if it were insoluble.

He had a devoted wife, a happy home, warm friendships, and the grateful esteem of his patients.

T. B.

THE death is recorded of Sir STUART WOODHOUSE of Dublin at the age of 75 years. He was the son of the late Mr. George Woodhouse of Dublin, and was educated at the Royal School, Dungannon, and at Trinity College, Dublin. He graduated M.B.Dubl. in 1872 and M.D. in 1874, in which year he also took the diploma of F.R.C.S.I.; in 1902 he became F.R.C.P.I. He had served the posts of assistant physician and pathologist to the Richmond Hospital, physician to the Children's Hospital, registrar and lecturer on pathology at the Carmichael School, and an examiner in general education at the Royal College of Surgeons of Ireland. He relinquished a large private practice in 1880 on becoming an inspector under the Local Government Board for Ireland. In 1890 he became the medical member of the General Prisons Board, Ireland, but retired after fourteen years' service owing to ill health. He received the honour of knighthood in 1908.

WE regret to announce the death of Dr. E. H. DUNCAN of Strathpeffer. He was a graduate in arts and medicine of the University of Edinburgh. Before settling in Strathpeffer he spent two years travelling in Australia and Japan. He was well known in the North of Scotland. Some years ago he published a book on *Strathpeffer Spa: its Waters and Baths*. He was long a member of the Association, and was for some years secretary to the Ross and Cromarty Division.

Universities and Colleges.

UNIVERSITY OF LONDON.

UNIVERSITY COLLEGE.

THE following awards in the Faculty of Medical Sciences have been made at University College:—*Cluff Memorial Prize:* Katharine A. C. Gillie. *Anatomy:* Senior Class Gold Medal, L. Reuvid; Junior Class Silver Medal, Mary E. Tyars. *Physiology;* Senior Class Gold Medal, Katharine A. C. Gillie; Junior Class Silver Medal, Iris M. Harmer. *Organic and Applied Chemistry:* General Course Silver Medal, Marian G. Palmer.

UNIVERSITY OF BRISTOL.

THE following candidates have been approved at the examinations indicated:

FINAL M.B., CH.B. (*Part I only*).—Madge E. Golding.
D.P.H.—F. Campbell.

UNIVERSITY OF LIVERPOOL.

THE following candidates have been approved at the examinations indicated:

M.D.—N. B. Capon, R. W. Gemmell, W. E. Huff-Hewitt, W. A. Jackson, C. V. Pearson.
CH.M.—J. St. G. Wilson.
M.B. AND CH.B.—*G. W. Phillips, †G. P. F. Allen, †A. V. Campbell, ‡S. B. Herd, ‡Isabel E. Imison, ‡M. Newman, ‡S. V. Unsworth. *Part I.*—B. Abelman, G. C. Bhatia, R. H. Blair, R. L. Blair, N. B. Cooke, W. H. A. Dodd, J. O. Edwards, E. H. Glynn, C. B. Lewis, I. Lloyd, J. R. Parry, G. F. G. Prideaux, J. K. Reid. *Part II.*—§Ethel Ashton, E. W. Ashworth, Eudora V. Beatty, R. H. Blair, R. L. Blair, D. Brown, Hilda Cantrell, A. Cathcart, ‖. Clark, Marie B. Clarke, H. M. Cohen, ‖H. Cohen, ‖M. J. Cohen, J. B. Cooke, R. L. Corlett, V. C. Cornwall, §Helen M. Duvall, J. Elsohn, §W. C. Evans, E. Fisher, §R. A. Galway, H. S. Gordon, J. V. Hall, §S. B. Hall, T. K. Hughes, Hilda F. Jefferson, A. Kefalas, Dorothy E. Knowles, C. L. Kopeland, §Eleanor Lancelot, I. Lloyd, §N. H. H. Longton, B. L. McFarland, Lilian W. Massey, Annie Mather, §Vera M. Mitchell, §Annie R. Niven, Mary E. Nosworthy, §Muriel Pickering-Jone, E. D. Pridie, §Gertrude E. Pugmire, §D. Riding, §Mary D. Sheridan, §J. E. T. Shirlaw, J. E. Sykes, §V. T. Thierens, Mary A. Thomas, §A. K. P. Tobin, C. Voigt, C. H. Walsh, Dorothy A. Williams, Grace H. Wood. *Part III.*—F. H. Alexander, G. C. Bhatia, Doris Brown, W. E. A. Burton, Doris M. Cassidy, W. M. Frazer, G. L. Gately, Susan H. Gilchrist, J. Goldberg, Isobel K. Johnstone, R. J. Jones, A. Livingston, H. R. Madan, J. B. Oldham, T. R. Robertson, S. S. Skri-Kent, C. Voigt, T. A. Williams.

* First Class Honours and distinction in Obstetrics and Medicine.
† Second Class Honours and distinction in Surgery.
‡ Second Class Honours and distinction in Obstetrics.
§ Distinction in Public Health.
‖ Distinction in Forensic Medicine and Toxicology and Public Health.

D.P.H.—W. H. Brown, Gladys E. Chambers, J. H. Crane, A. Hamid, Dorothea E. Hewitt, Mary A. McHugh, R. Nixon, C. M. Ram, H. Rawsthorne, Dorothy M. Unsworth.

UNIVERSITY OF DUBLIN.

TRINITY COLLEGE.

THE following candidates have been approved at the examinations indicated:

FINAL M.B., PART I.—*Materia Medica and Therapeutics; Medical Jurisprudence and Hygiene; Pathology and Bacteriology:* *J. C. Earl, *J. O'N. McKenna, *P. J. Grobler, *G. F. T. Saunders, *W. F. Whaley, *R. H. Micks, *R. T. Jackson, *M. P. Louw, D. H. F. Milmo, M. Wulfsohn, D. M. Vellema, R. Hegy, J. D. Wicht, M. M. Viljoen, M. Gallivan, L. J. Coetzee, L. Heyman, Alice M. A. Downing, J. H. J. Stuart, D. L. H. Moore, J. H. Rauch, R. L. Hill, F. W. G. Smith, W. S. Dixon, C. de L. Shortt, C. G. S. Van Heyningen, B. Vivier, A. Bernstein. *Pathology and Bacteriology only:* S. W. Russell, H. Hall. *Materia Medica and Therapeutics only:* R. N. Perrott. *Materia Medica and Therapeutics; Medical Jurisprudence and Hygiene:* J. Harte.

PART II.—*Medicine:* *Margaretta T. Stevenson, Alida C. Burt, Alice E. Lawlor, A. E. Phillips, R. V. Dowse, Constance McIlrath, A. V. J. Russell, J. Devane, J. D. Thompson, Doris Holland, Emily E. G. Baillie, J. C. Brennan, M. R. Coolican, R. R. Baker, W. H. Smith, G. C. Malherbe, J. M. Semple. *Midwifery:* *C. J. U. Murphy, *I. G. Sacks, *C. D. Dijkman, *A. V. J. Russell, *Doris Holland, G. M. Irvine, *I. F. E. Cockle, T. de Bruijn, D. Hugo, Emily E. G. Baillie, C. T. de M. Villet, C. S. Wilson, F. Malone-Barrett, C. de L. Shortt, H. C. C. Deane, F. M. Hilliard, T. W. Panter, M. Elion, G. C. B. Robinson, Margery Bouchier-Hayes, W. S. Dickson. *Surgery:* *E. S. Horgan, L. Wigoder, Edith F. Willock, E. R. Murray, A. V. J. Russell, Olive V. Fair, Nannette Norris, A. S. Bradlaw, Alice E. Lawlor, P. M. J. Bobbett, A. D. Ward, J. M. Semple, M. R. Coolican, J. C. Davis.

D.P.H., PART I.—*Chemistry, Bacteriology and Pathology, Physics and Meteorology:* E. D'A. McCrea, R. P. Pollard, A. G. Wright, W. B. J. Pemberton.

* Passed on high marks.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION TO THE COUNCIL.

A MEETING of the Fellows was held on July 7th for the election of four Fellows into the Council in the vacancies occasioned by the retirement in rotation of Sir George H. Makins, Mr. J. Ernest Lane, Mr. H. J. Waring, and Mr. F. F. Burghard. Mr. Waring and Mr. Burghard were declared by the President, Sir Anthony Bowlby, duly re-elected and Mr. C. H. Fagge and Mr. W. Thelwall Thomas duly elected members of the Council. Mr. W. T. Thomas, being fourth on the poll, becomes substitute member for Sir George Makins until July, 1927. 923 Fellows voted, 916 sending their ballot papers through the post, 7 voting in person. The result of the poll was as follows:

	Votes.	Plumpers.
HOLBURT JACOB WARING	415	3
FREDERIC FRANÇOIS BURGHARD	410	2
CHARLES HERBERT FAGGE	353	47
WILLIAM THELWALL THOMAS	331	34
Louis Bathe Rawling	271	10
Victor Bonney	247	14
John Herbert Fisher	214	31
Russell John Howard	193	17
Arthur Henry Cheatle	186	5
Donald John Armour	124	9
William Turner	94	3

ROYAL FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.

THE following have been admitted as Fellows:

Charles Cameron, Charles G. A. Chislett, James P. Crawford, Lachlan Grant, James L. Gregory, Robert Kennedy, David D. Logan, James E. Middlemiss.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT a meeting on July 7th, the President, Sir James Craig, announced the award of the Harry Godfrey Massy-Miles Prize to Dr. George Edward Strahan, a former student in the School of the Royal College of Surgeons. Dr. Strahan served during the war as Surgeon Sub-Lieutenant in the Royal Navy, was mentioned in dispatches, and received the Distinguished Service Cross.

The "Harry Godfrey Massy-Miles Prize" has been established in the Royal College of Physicians of Ireland by Mrs. Massy-Miles in honour of her husband Captain Harry Godfrey Massy-Miles, M.C., R.A.M.C., a licentiate of the College, who died of wounds received in France on April 18th, 1918.

CONJOINT BOARD IN IRELAND.

THE following candidates, having passed the summer qualifying examinations, were admitted Licentiates on July 6th and 7th:

M. Barton, H. C. Bell, W. B. Burke, D. Clein, J. H. B. Crymble, R. H. Dolan, T. E. Dorran, C. J. C. Earl, M. A. English, M. Elyan, J. A. Fitzgerald, J. Hewitt, F. W. G. Kelly, J. I. Levi, B. A. McElhinney, J. McGuire, M. Moloney, Eveleen N. Murphy, Mary C. O'Brien, P. J. Quigley, B. Scher, G. E. Strahan, J. Shannon, T. A. C. Stevens, A. D. Watchman.

Medical News.

SIR ROBERT JONES, who went to Boston to attend the meeting of the American Orthopaedic Association, received a most cordial welcome both there and in other centres he visited. The University of Harvard gave him the honorary degree of Doctor of Science, and the University of Yale that of Doctor of Laws. Perhaps the most remarkable honour was the degree of D.Sc., conferred upon him by Smith's College, Northampton, one of the largest women's colleges in America, with some 2,000 graduates. This was the first occasion on which it had ever conferred an honorary degree upon a man.

AT a meeting of tuberculosis officers held in Birmingham on July 9th a Midland Tuberculosis Subgroup of the Tuberculosis Group of the Society of Medical Officers of Health was formed and Dr. G. B. Dixon was elected temporary president. The organizing secretary is Dr. A. Ashkenny, Town Hall, West Bromwich.

A POST-GRADUATE course on diseases of the digestive system will commence on September 12th at the Hôtel-Dieu, Paris, under the direction of Professor Maurice Villaret. It will consist of clinical examinations at the bedside, and of instruction in recent therapeutic methods. The fee will be 150 francs. An excursion will be made, from September 23rd to 25th, to Vichy and Chatel-Guyon to study the balneological methods in vogue there. Full particulars may be had from M. Deval at the medical clinic of the Hôtel-Dieu, Paris.

THE annual general meeting of the Medical Golfing Society was held on June 29th, when Dr. Rolf Creasy was elected President, and Dr. Rolf Creasy, jun., Secretary and Treasurer. Rules were drafted and the subscription increased to 10s., payable on January 1st of each year. It is proposed to hold an autumn meeting in addition to the usual summer one. Mr. Canny Ryall has kindly promised to present a challenge cup of the value of £105, which must we won three times in all to be won outright. The President also offers a cup, and Mr. Ernest Clarke will give a small cup each year to be kept by the winner.

THE International Conference on Tuberculosis, which is to be held at the Institution of Civil Engineers, Westminster, from July 26th to 28th, will be attended by over 100 foreign delegates. M. Leon Bourgeois, President of the French Senate, will be in the chair, and Lord Curzon and Sir Alfred Mond will welcome the conference on behalf of the Government.

THE Faculty of Medicine of Paris has decided to appoint a number of foreign medical men as clinical assistants in its clinics. Medical practitioners who desire to fill these positions should send to the Dean of the Faculty of Medicine of Paris an application accompanied by a statement of their qualifications and a letter of recommendation from the Dean of their own Faculty. Those who are appointed will act as clinical assistants for a period which will not be less than three months or more than one year; at the end of the time a certificate will be given.

WE regret to announce the sudden death of Dr. J. A. Menzies, Professor of Physiology in the College of Medicine, Newcastle, and one of the Vice-Presidents of the Section of Physiology, Pharmacology, Therapeutics and Dietetics, at the forthcoming Annual Meeting of the British Medical Association.

LIEUT.-COLONEL KNOWLES STANSFIELD, C.B.E., on the occasion of his retirement after twenty-three years' service as medical superintendent of the L.C.C. Mental Hospital at Bexley, was the recipient of a casket and illuminated address, presented by the officers and staff at the hospital. Mr. Robert Jackson, L.C.C. chairman of the Visiting Committee, made the presentation on June 30th, and Dr. C. Hubert Bond, of the Board of Control, who was formerly senior assistant medical officer at Bexley, and members of the Visiting Committee, spoke most appreciatively of the pioneer work accomplished by Colonel Stansfield in the improvement of the administration and treatment in mental hospitals.

ON July 12th the King George's Sanatorium for Sailors, at Bramshott, Liphook, Hampshire, which is to be conducted as a branch of the Seamen's Hospital Society, was opened by the Duke of York. The sanatorium has been established and endowed by a fund amounting to £100,000, to which the Ministry of Health granted £14,500, the King George's Fund for Sailors contributed £6,950, and the Seamen's Hospital Society £11,087; assistance was also received from King Edward's Hospital Fund, the British Red Cross Society, and the National Relief Fund. The Duke of York was received on his arrival by the Marquess of Milford Haven, president of the Seamen's Hospital Society, and by the chairman and deputy chairman of the Society. In declaring the sanatorium open the Duke said that he was glad to know that the Seamen's Hospital Society, which founded the Dreadnought Hospital a hundred years ago, had now been able to open the first sanatorium exclusively for seamen. The sanatorium was a memorial to the valour of the British seamen of the Royal Navy and the merchantile marine, who had faced an equal danger and shared an equal honour. Four winters of the war at sea had caused the health of many seamen to be undermined, and many of them would be cared for at Bramshott. Four wards and one other bed have already been endowed, and tablets recording these endowments were unveiled by the Duke in the course of a tour of the sanatorium.

IT is reported that influenza has reappeared in Spain, where in some districts it is of a more serious character even than in 1918, particularly in Salamanca and Valladolid where there have been several deaths among the soldiers stationed there.

THE fifteenth French Congress of Medicine will take place at Strasbourg from October 3rd to 5th, under the presidency of Professor Bard.

GUY'S HOSPITAL biennial dinner will be held on October 26th, at the Connaught Rooms, London. Mr. Montagu Hopson will preside, and tickets, which will cost 15s. exclusive of wine, and other information, may be obtained from the honorary secretary, Mr. Arthur W. Ormond, 7, Devonshire Place, W.

ON July 9th a competition concert was held at the West End Hospital, St. Catherine's Lodge, Regent's Park, of the King's Services Choirs, which consist of ex-service singers in and out of hospital. Cups were presented to the winning choirs by the Countess of Bective. The concert showed the excellent results of the vocal therapy training which these ex-service men have had. The training endeavours to restore through speech, song, and correct breathing the physical and mental health of the sick, wounded, and disabled soldiers.

AT the annual meeting of the American Medical Association in Boston Dr. George E. de Schweinitz, professor of ophthalmology in the University of Pennsylvania, was elected President-elect of the American Medical Association for the ensuing year. Dr. de Schweinitz graduated in arts at the Moravian College, Bethlehem, Pennsylvania, in 1876, and in medicine at Pennsylvania University in 1881; the degree of LL.D. was conferred on him by his university in 1914. He has made many contributions to ophthalmology, and is an ex-President of the American Ophthalmological Society. He served in France in the American Army Medical Corps, in which he attained the rank of colonel.

A BUREAU has been organized at the Faculty of Medicine, 12, Rue de l'Ecole de Médecine, Paris, of the "Association pour le developpement des relations médicales entre la France et les pays alliés," where information as to hours of clinics, etc., will be given to medical men visiting Paris.

DR. M. DIAMOND, Chayes Post-Graduate Instructor at the Dental Institute of New York, will give a lecture and demonstration "On some new phases of old problems in dental reconstruction" on Monday, July 25th, at 5.30 p.m., at the Royal Society of Medicine, 1, Wimpole Street, W.1. All interested are invited to attend, whether or not Fellows or Members of the Society.

AT the seventy-seventh annual meeting of the American Medico-Psychological Association, held at the beginning of June, in Boston, a new constitution was adopted, and it was resolved that the *American Journal of Insanity* should in future be published under the new name of the *American Journal of Psychiatry* as the official organ of the Association.

Letters, Notes, and Answers.

As, owing to printing difficulties, the JOURNAL *must be sent to press earlier than hitherto, it is essential that communications intended for the current issue should be received by the first post on Tuesday, and lengthy documents on Monday.*

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2630, Gerrard.

2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.

3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2630, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin (telegrams: *Bacillus, Dublin*; telephone, 4737, Dublin), and of the Scottish Office, 6, Rutland Square, Edinburgh (telegrams: *Associate, Edinburgh*; telephone, 4361, Central).

QUERIES AND ANSWERS.

INCOME TAX.

"J. F. S." inquires whether a medical practitioner can claim for the year 1920-21 to pay tax on the actual profits of that year if his profits are 10 per cent. less than the average of the three preceding years.

*** The practitioner is in the same position as the business man as regards the section in question, but the view of the Government—presumably on the advice of the law officers of the Crown—is that that section does not operate for 1920-21 because it was not specifically re-enacted. The view taken in many quarters is that that re-enactment is not required, and the Government's proposal is to cut the Gordian knot by inserting a declaratory provision in the Finance Act for 1921-22 disposing of the question by statute. In the circumstances "J. F. S." had perhaps better wait to see whether the Finance Act does settle the point before making his formal claim, which can be lodged—if at all—at any time before April 6th, 1922. The 10 per cent. condition applies to total income and not to the earned portion only.

"G. H." inquires as to the following motor-car transactions:

1911. De Dion, new, bought for £400.
1913. Briton, new, " £200.
1921. Former sold for £80 and a Citröen Coupé bought for £550, and latter sold for £150 and a Wolseley Coupé bought for £730.

The inspector offers to allow one-half cost only, as he contends that the more modern cars are "more luxurious than those which they replace."

*** The greater convenience given by modern accessories does not always add much to the cost, but while we think that to allow one-half only is unreasonable, we also think that there is something in the inspector's contention in principle. "G. H." suggests that the Coupé model is really a necessity in his circumstances, but this does not affect the principle that where money is laid out on improvements (whether necessary or not), that expenditure represents capital outlay. We suggest that "G. H." obtain quotations of the 1921 cost of a Briton and a De Dion car (or of cars as similar as possible), of the same horse-power, seating capacity, and body type as those he had originally, and claim allowance of the total of those two sums less £80+£150=£230.

"H. G. B." inquires as to the allowance he is entitled to for the purchase of a new car and motor cycle. He has not yet been able to sell his old car. He asks whether the inspector is entitled to require audited accounts of the practice.

*** "H. G. B." is entitled to the cost of replacing his old car, and we fear that until the old car is disposed of he cannot make a claim for the purchases. In any case the cycle would seem to be an outright addition, so that no allowance is due; but when the old car is sold he will be entitled to an allowance equal to the cost of such a car as at the date when the new one was purchased, less the receipts from its sale. The inspector is not entitled to require production of accounts, but if he has reason to suppose the amount returned to be insufficient the Commissioners might make their assessment on an estimate and "H. G. B." would then be required to produce accounts on the resulting appeal. We suggest that some conversation with the inspector might have the desirable effect of clearing the air and enabling some mutually satisfactory arrangement to be made.

CARCINOMA OF THE TESTES.

DR. VAUGHAN PENDRED (East Sheen) writes: Sixteen months ago I removed a much enlarged right testis from a healthy man of 65. The pathologist reported marked carcinoma. The patient remained perfectly well until a fortnight ago when he presented himself with the left testis enlarged, notably the head of the epididymis. I removed this testis, clearing out the scrotum as far as possible, and dividing the cord high up. The pathologist reports "a solid mass of carcinomatous new growth." There was no spreading of the cancer across the scrotum from the first testicle—the intervening tissues macroscopically being perfectly normal. That the patient has remained very well for sixteen months and that now his second testis has independently become carcinomatous, must be excessively rare. It would be interesting to learn if any other surgeon has met a like condition.

LETTERS, NOTES, ETC.

REFRACTION WORK IN SCHOOL CHILDREN.

DR. ARTHUR T. BLEASE (Altrincham), in the course of a letter on this subject, writes: Drs. Wilkins and Williamson are to be sympathized with in having to deal with ten thousand children "requiring refraction," and only one school oculist to do the work. Certainly in their position I should not feel justified in spending very much time in confirming retinoscopy by subjective testing in the case of very backward children, or the very few whose nervousness cannot be allayed to the extent that they will probably be able to name a letter they really see; but neither would I act on Mr. Harman's opinion that subjective testing is useless in children between 5 and 14 years of age. They inquire as to the earliest age at which subjective testing is useful. It is of course not merely a question of age, but usually in an elementary school child aged 8 it is quite possible, only of course as an adjunct to retinoscopy; a few days ago I used it without difficulty in a boy aged 5½, but he was above the elementary school type.

Most of the ten thousand children requiring sight-testing in Staffordshire have presumably been discovered to have this need because they cannot read the blackboard beyond a very short distance, or because they cannot read the ordinary test-types—usually both, I expect. In either case it is subjective testing, and has been employed, showing it is possible. If with glasses according to the retinoscopy they can read better it would appear reasonable and gratifying to record the fact and the amount of improvement, in other words, to check the retinoscopy by subjective testing. If, on the contrary, they cannot read better, what has it all been about?

MEDICINE AS A SCIENCE.

MR. W. ROGER WILLIAMS, F.R.C.S. (Clevedon), writes: In the issue of the BRITISH MEDICAL JOURNAL for June 4th the question is mooted as to "medicine" being a science. In order to answer such a poser, it is necessary to know something about the birth and infancy of medicine. It is not necessary to go beyond the infantile stage, because, having been "more professed than laboured" for so many centuries, medicine is still in this interesting condition.

A more striking example of the strange way in which fact and fancy are interwoven in our human fabric can hardly be found than in the life-history of this backward child—the outcome of the three great Utopias of the ancient world: magic, alchemy, and astrology. It was in Egypt that he was born and bred; for the Greeks only developed what they derived from the Egyptians. In Egypt the medical art was as old as Pan, and as promiscuous. It arose under the aegis of the priests, in a witches' cauldron of superstition and religiosity. Magic was its chief ingredient, with officiating priests as Hecate: and there were elaborate rites and ceremonies, with incense, sacrifices, enchantments, incantations, mysteries, spells, exorcisms, penitential supplications and offerings. To these add divinations, haruspices, auguries, horoscopes, elixirs, sorceries, prodigies, thaumaturgies, miracles, ghosts, spirits, goblins, fays, totems, with talismans, charms, amulets, philtres, abracadabras, and abraxas. At Lourdes, under the aegis of a modern church, we may see such cures now being performed. Such is the brew of which the medical art was compounded; and since such natal influences can never be entirely got rid of, we need not be surprised at some of its modern vagaries; and that it still remains a highly conjectural art, notwithstanding the efforts of science to extricate it from the ancient thraldom.

Almost the only generalized conception as to the nature of disease attained by the ancients was the obsession as to maladies being caused by an evil spirit possessing the affected individual, which, of course, had to be driven out or conciliated to effect a cure. The moderns have got rid of this obsession without having acquired any generalized conceptions in its place. You cannot have science without at least some generalized conceptions. Our infant is unprogressive because he is fed up with details. The spirit of the age produces these in undue abundance. In vain do we ask that these *disjecta membra* should be generalized and reduced into order. "Instead of that the heap continues to swell." Our infant still lacks the eye of philosophy. His lore is not unlike a magnificent library turned upside down. It is forgotten that it is an essential feature of science to connect; and "no natural phenomenon can be adequately studied in itself alone." With this undone the mental outlook necessarily remains confused and infantile—that is to say, unscientific. There is lack of light and leading, and consequently of progress. The unbridled empiricism of our age, which we all have to deplore, is a consequence of this arrested development. It differs from that of antiquity in direction rather than in essence, and in both instances its causation is the same. It is a danger to the practice of medicine when science and its teachings are but little considered or disregarded; for, under such circumstances, knowledge of the art is apt to become inferior to that of the trade. Here then we must leave our infant in the hope that future generations will be able to break the thrall retarding development.

PNEUMOTHORAX.

DR. CHAS. J. HILL AITKEN writes: A patient suffering from phthisis pulmonalis was suddenly seized with severe pain in her chest. She collapsed and was put to bed. I saw her on the following day, when I diagnosed pneumothorax of the left side. A day later, when she was somewhat better, I asked her to describe to me what happened, telling her at the same time that something had burst in her chest. The story she gave me was that after a fit of coughing she heard a sound like the "explosion of a gun," and a severe agonizing pain in her chest seized her. The next day she modified her statement by saying that perhaps an "explosion of a gun" was an exaggeration, but she certainly heard a noise in her chest—a crack, short and sharp.

ALASTRIM OR KAFFIR POX.

DR. S. LITTLEWOOD (Mansfield) sends a note of a case of alastrim which occurred under his notice. Its great similarity to small-pox was, he says, noted, and the case was, in fact, diagnosed and treated as small-pox; the only doubt being in the fact that the man, a gunner in the R.F.A., was well vaccinated but twelve months ago. The man, aged 20, had just returned to England with his brigade from Palestine, and was in this country three weeks when he began to suffer from pyrexia and pains in the lower limbs; the rash appeared on the third day, when the temperature fell, and a general feeling of improvement was experienced. The rash was typical of small-pox in appearance and distribution. There is an article on this disease in the *Medical Officer* of July 9th, 1921, which describes the condition.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 34, 35, 38, 39, and 40 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 36 and 37.

THE appointments of certifying factory surgeons at Senny Bridge (Brecon) and Swinton (Lancaster) are vacant.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THI BRITISH MEDICAL JOURNAL.

	£ s. d.
Six lines and under	0 9 0
Each additional line...	0 1 6
Whole single column (three columns to page)	7 10 0
Half single column	3 15 0
Half page	10 0 0
Whole page	20 0 0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Tuesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.